ACER SERVICE MANUAL

Trident EX52 compatibly model:

AT4202P

THIS DOCUMENT IS FOR REPAIR SERVICE INFORMATION ONLY.

DATE：2006/02/13

CONTENTS

1、SPECIFICATION

1-1-1 General Specificaation

Item		Specification		
Panel Spec	Screen size	42 inch plasma display panel		
	Aspect	16:9		
	Display pixels	852 x 480 (WXGA)		
	Effective display size	933mm x 533mm		
	Number of color	16.7 million colors		
	Contrast Ration	10000:1 (in dark room)		
	Peak brightness	1500 cd/㎡		
TV Mode	TV Tuning	1 Tuners, 100 channel save		
	Sound system	D/K I B/G L/L'		
	Color system	PAL /SECAM		
Video Mode	Video	RCA x 1	PAL, NTSC, SECAM	Audio: L/R x 1
	S-Video	S-Video1 x 1	PAL, NTSC, SECAM	
	SCART Europe 21Pin	SCART x 3	PAL, NTSC, SECAM	Audio: L/R x 3
	Component 1,2 (Y Pb Pr/ Y Cb Cr)	Y Cb Cr	480i (60Hz)	Audio: L/R x2
			576i (50Hz)	
		Y,Pb,Pr (HDTV)	480P (60Hz)	
			720P (60Hz)	
			576P (50Hz)	
			1080i(50/60HZ)	
PC Mode	Signal input	Analog: D-Sub 15 pin		
	Plug and play	DDC / 2B		
	Support Frequency	FH:31KHz to 69KHz , FV:56Hz to 75Hz		
	RGB Mode(D-Sub Mode)	VESA: 640 x 480 (60Hz/72Hz/75Hz) VESA: 800 x 600 (56Hz/60Hz/72Hz/75Hz) VESA: 1024 x 768 (60Hz/72Hz/75Hz) VESA: 1280 x 1024 (60Hz)		
	RGB Mode (D-Sub Audio)	Earphone (3.5ø)		
DVI Mode	Signal input	Digital: DVI-D 24 pin		
	Plug and play	DDC / 2B		
	Support Frequency	FH:31KHz to 69KHz , FV:56Hz to 75Hz		
	DVIMode	VESA: 640 x 480 (60Hz/72Hz/75Hz) VESA: 800 x 600 (56Hz/60Hz/72Hz/75Hz) VESA: 1024 x 768 (60Hz/72Hz/75Hz) VESA: 1280 x 1024 (60Hz)		
		480i,576i,480P, 576P, 720P, 1080i(50/60Hz).		
	DVI Audio	Earphone (3.5ø)		
Video Out	SCART Europe 21Pin	PAL, NTSC, SECAM		
Audio Out	Speaker Amplifier	External:10W × 2		
	Audio Output	Earphone (3.5ø)		
Power	Power input sources	100--240V~ ,50/60Hz		
	Power consumption	300W (Typical)		
Environment	Operation Temperature	+ 0 °C ~ + 40 °C		
	Storage Temperature	- 10 °C ~ + 50 °C		
	Humidity	10% -- 85%		
Dimension	Width x Height x Thickness	1060 x730 x 240 (mm)		
Net weight	No Accessory	37.5 Kg		
Accessory	Remote Control Transmitter, Battery (AAA X 2), Power Cord, , User's Manual			
Choose Part	Wall Mounting Bracket, S-Video Cable			

1-2 Feature Summary

42 inch Large Screen Flat Panel Plasma Display

Panel Resolution: WVGA （852 x 480 Pixels）

Panel Max Brightness: 1500 cd /m^2

Panel Max Contrast Ratio: 10000:1

View Angle: horizontal ≥160º/vertical ≥160º

Built-in Single-way TV Tuner, Supporting 100channels

Full Channel TV Signal Receiving: 48.25MHz —863.25MHz

Factory presets

Teletext WST625 for Europe

Functions of Dual Language, Stereo, Mono, Single-way Video, Single-way S-Video,3 group SCART ,Component Signal Receiving

Supports Signal Input of 480i, 480P, 576i, 576P, 720P, 1080i(50/60Hz)

TV Receiving System: PAL/SECAM BG/DK/I/L L'

Supports PC VGA Signal Receiving

DVI –D Signal（TMDS）INPUT,Support HDTV, SDTV

External Speaker 4Ω 8W×2(Option)

Internal Speaker 8Ω 5W×2

8-bit Digital Video Decoder

3D Digital Comb Filter

3:2 and 2:2 Movie modes

DLTI/DCTI Brightness, Color Digital Tuning

Digital I/P Processing, Completely Digital Progressive Display

HDSPT Duel-way High Quality Digital Image Processing

Stationary Image While Switching Channels

Built-in Graphic OSD Interface

Timer Function, Turn Off Timing

Remote Control

Displays Mode Switching (Normal, Wide Screen, Full Screen, Enlargement)

Automatic Shut Down When No Signal Input

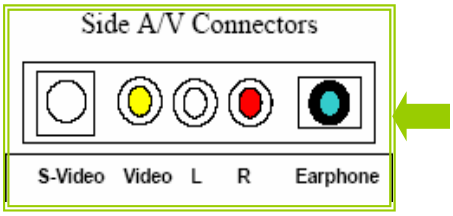
Automatic Shut Down in Blue Screen Status without Signal Input

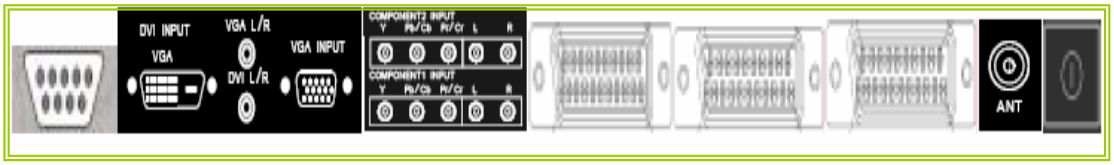
Shows Blue Screen When No Signal Input

Microprocessor controlled scan technology

1-3 External Interface

Most of these interfaces are located at the back-panel. There's also a group of connectors located on the side of this device for easier access. The following figures depict these A/V connectors.





1-3-1 Video/Audio Inputs

The following sections specify the video/audio inputs for P42S351

1-3-1-1 TV Antenna Interface

①. TV Antenna Connector

P42S351 shall provide a f-type cable connector with 75 ohms termination on its back panel for reception of radio frequency signals.

②. TV Systems

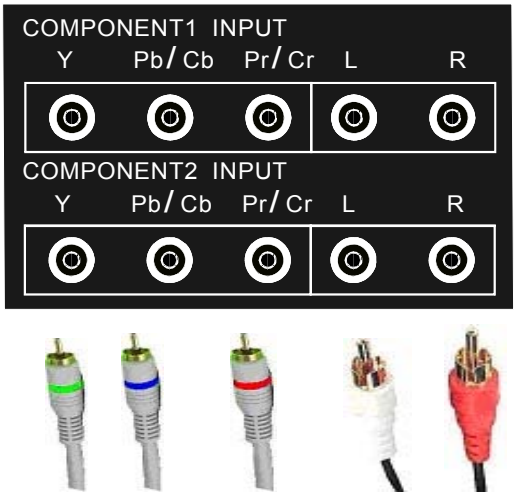
PAL/SECAM

③. TV Channel Coverage

the RF tuner shall be capable of covering 48.25MHZ to 863.25MHZ and tuning to the following channels:

1-3-1-2 Component Intputs

We have AV input jacks for VIDEO/AUDIO and S-VIDEO/AUDIO.



If your DVD or VCD player is equipped with Y PbPr(Y Cb Cr) signal output, you can connect these signals to the component signal input end of the TV to get better image quality, as the figure shows.

Note: when you find picture scrolling, the wrong color or no color, no image or all of the above,e check the connection. Please check if the color of the cable matches the color of the input socket.

1-3-1-3 PC Input

P42S351 accommodates a VGA type computer connection as specified below.

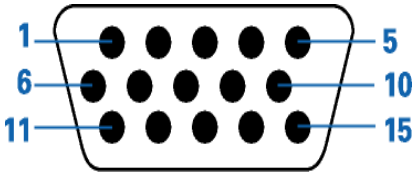
①. Connect D-SUB signal cable（VGA cable, RGB cable）from PC to D-SUB jack at the back of this TV Set. And connect the earphone cable from PC earphone output jack to AUIDO input jack near to the D-SUB jack.

Setup:

Use the key “SOURCE”in Remote Control or “MODE”key on the front control keypad, select the

source to “D-SUB” state. Then turn on the PC.

Pin - Assignment of 15-pin	
NO	FUCTION
1	Red Video
2	Green Video
3	Blue Video
4	ID2
5	Ground
6	Red Ground
7	Green Ground
8	Blue Ground
9	NC
10	Sync Ground
11	ID0
12	Serial Data for DDC
13	H-Sync.
14	V-Sync.
15	Serial Clock for DDC



②.**Audio Inputs**

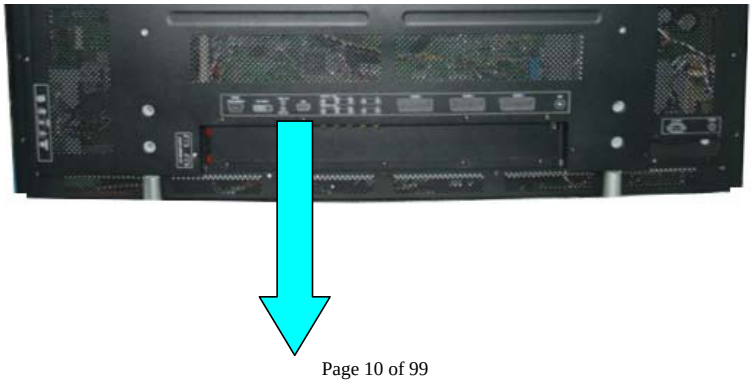
P42S351 shall provide a 3.5 mm jack for the stereo audio signal associated with VGAinput.

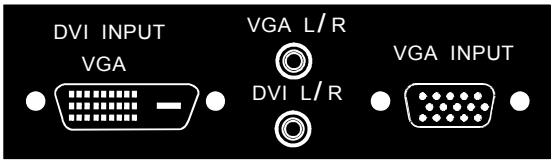
③. **Input Formats**

P42S351 shall support the following input format on its VGA input.

VESA MODES							
			Horizontal		Vertical		
Mode	Resolution	Total	Nominal Frequency (KHz)	Sync Polarity	Nominal Freq. (Hz)	Sync Polarity	Nominal Pixel Clock (MHz)
VGA	640x480@60Hz	800 x 525	31.469	N	59.940	N	25.175
	640x480@72Hz	832 x 520	37.861	N	72.809	N	31.500
	640x480@75Hz	840 x 500	37.500	N	75.00	N	31.500
SVGA	800x600@56Hz	1024 x 625	35.156	N/P	56.250	N/P	36.000
	800x600@60Hz	1056 x 628	37.879	P	60.317	P	40.000
	800x600@72Hz	1040 x 666	48.077	P	72.188	P	50.000
	800x600@75Hz	1056x625	46.875	P	75.000	P	49.500
XGA	1024x768@60Hz	1344x806	48.363	N	60.004	N	65.000
	1024x768@70Hz	1328x806	56.476	N	70.069	N	75.000
	1024x768@75Hz	1312x800	60.023	P	75.029	P	78.750

④. **Connecter**





1-3-1-4 DVI input

P42S351 shall accommodate a DVI type digital video source as specified in this section.

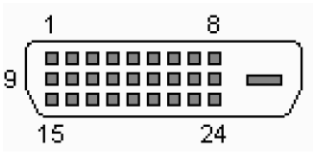
①. Video Inputs

Connect DVI-D 24 Pin signal cable（TMDS cable）from equipment with DVI-D jack to the back of this TV Set. And connect the earphone cable from equipment with earphone output jack to AUIDO input jack near the DVI-D jack.

Setup:

Use the key “SOURCE” in Remote Control or “MODE” key on the front control keypad, select source to “DVI” state. Then turn on the equipment.

DVI-D Digital connector pin assignments		
PIN	MNEMONIC	SIGNAL
1	TX 2 -	TMDS Data 2 -
2	TX 2 +	TMDS Data 2 +
3	SHLD 2 / 4	TMDS Data 2 / 4 Shield
4	TX 4 -	TMDS Data 4 -
5	TX 4 +	TMDS Data 4 +
6	DDC Clk	DDC Clock
7	DDC Data	DDC Data
8	N/C	No Connect
9	TX 1 -	TMDS Data 1 -
10	TX 1 +	TMDS Data 1 +
11	SHLD 1 / 3	TMDS Data 1 / 3 Shield
12	TX 3 -	TMDS Data 3 -
13	TX 3 +	TMDS Data 3 +
14	+5V	+5V Power (from the PC)
15	GND	Ground (Return for +5V)
16	HPD	Hot Plug Detect
17	TX 0 -	TMDS Data 0 -
18	TX 0 +	TMDS Data 0 +
19	SHLD 0 / 5	TMDS Data 0 / 5 Shield
20	TX 5 -	TMDS Data 5 -
21	TX 5 +	TMDS Data 5 +
22	TX CLK SHLD	TMDS Clock Shield
23	TX CLK +	TMDS Clock +
24	TX CLK -	TMDS Clock -



②. Audio Inputs

P42S351 shall provide a 3.5 mm jack for the stereo audio signal associated with DVI input.

③. HDCP support

HDCP must be supported on the DVI input. Refer to the High-bandwidth Digital Content

Protection System specification version 1.1 for details.

④. Input Formats

P42S351 shall support the following input format on its DVI input.

VESA MODES							
			Horizontal		Vertical		
Mode	Resolution	Total	Nominal Freq. (KHz)	Sync Polarity	Nominal Freq. (Hz)	Sync Polarity	Nominal Pixel Clock (MHz)
VGA	640x480@60Hz	800 x 525	31.469	N	59.940	N	25.175
	640x480@72Hz	832 x 520	37.861	N	72.809	N	31.500
	640x480@75Hz	840 x 500	37.500	N	75.00	N	31.500
SVGA	800x600@56Hz	1024 x 625	35.156	N/P	56.250	N/P	36.000
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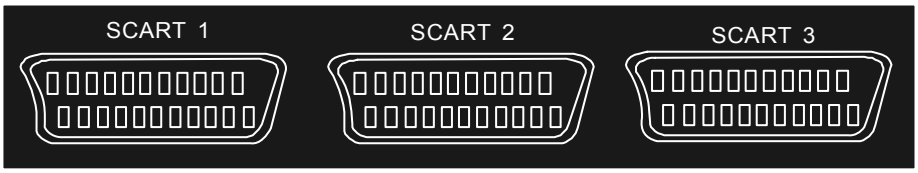
XGA	1024x768@60Hz	1344x806	48.363	N	60.004	N	65.000
	1024x768@70Hz	1328x806	56.476	N	70.069	N	75.000
	1024x768@75Hz	1312x800	60.023	P	75.029	P	78.750

Mode	Resolution	Total Line Per Frame	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Sampling Frequency (MHz)
480i	720x480 i	525	15.75	60	13.5
576i	720x576 i	625	15.625	50	13.5
480P	720x480 P	525	31.47	60	27.00
576P	720x576 P	625	31.50	50	27.00
720P	1280x720P	750	45	60	74.25
1080i	1920x1080 i	1125	28.125	50	74.25
1080i	1920x1080 i	1125	33.75	60	74.25

1-3-1-5 SCART Input



We have three SCART signal input jacks .

Scart Connector male

Output connector		Input connector	
PIN1	Audio right out	PIN2	Audio right in
PIN3	Audio left (or mono) out	PIN6	Audio left (or mono) in
PIN4	Audio return	PIN4	Audio return
PIN7	Blue out	PIN7	Blue in
PIN5	Blue return	PIN5	Blue return
PIN11	Green out	PIN11	Green in
PIN9	Green return	PIN9	Green return

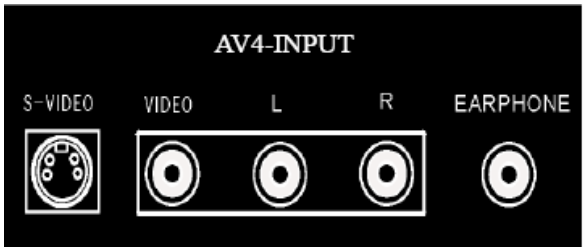
PIN15	Red out	PIN15	Red in
PIN13	Red return	PIN13	Red return
PIN16	RGB status out	PIN16	RGB status in
PIN14	RGB status return	PIN14	RGB status return
PIN19	Sync (composite video) out	PIN20	Sync (composite video) in
PIN17	Sync return	PIN 18	Sync return
PIN 21	Shield	PIN 21	Shield

1-3-2 Audio/Video Outputs

1-3-2-1 Composite Video Output

P42S351 shall provide a RCA type receptacle on its back panel for composite video output.

(Side board)



1-3-2-2 Analog Audio Output

P42S351 shall provide two RCA type receptacles for external connection to a stereo amplifier.

1-3-2-3 Head Phone

P42S351 shall provide a 3.5 mm jack at side of 42MF130A/37 for external connection of a stereo headphone.

1-3-3 Power Interface

1-3-3-1 Power Connector

P42S351 shall support an IEC C-13/C-14 (Standard) type male power receptacle for connection to AC power source.

1-3-3-2 Power Input Range

The operating range shall be from 100 to 240 VAC sinusoidal. Input power frequency range shall be from 50 to 60 Hz over the specified input voltage range.

1-3-3-3 Power Consumption

The monitor is equipped with a power-management function (DPMS) for analogRGB and component

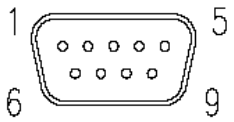
RGB input when DPMS setting is actived.There is a delay, according to the DPMS setting before the transition from Onstate to any power saving state to avoid unintentionally entering of a power saving stage during display resolution and timing mode changes. Transition from any power saving state to another can be instantaneous. The recovery from Off-state requires no manual power on.

1-3-4 Service Interface

P42S351 shall provide a 9-pin D-sub connector on its back panel for firmware upgrading purpose. This interface shall conform to RS-232 standard with the following pin-outs.

9PIN For Software Update And External Control

NO	FUCTION
1	NC
2	TXD transmitted data
3	RXD received data
4	NC
5	FG frame ground
6	NC
7	NC
8	NC
9	NC



The method of firmware upgrading please see **"Flash update process"** chapter.

1-4 User interface

1-4-1 Power Indicator

P42S351 shall make use of an LED type indicator located on the front of leftthe display.

The LED color shall indicate the power states as given in the following table.

LED colors

Mode	H-Sync	V-Sync	Video	Pw-cons.	Indicator
Power-On	On	On	Active	＜350W	Blue LED
Standby	Off	Off	Off	＜1W	Red LED
AC Swich-off	Off	Off	Off	0	LED off

1-4-2 Remote Control Receiver

P42S351 shall provide an infra-red (IR) optical detector on its front panel for use as the receiver for remote controller signal. The IR communication protocol shall conform to RC-5 standard. The minimum IR reception angles shall be +/- 30 degrees horizontally and vertically. The required operating distance of the remote control shall be 7 m.

1-5 External Mounting Requirements (Unpacked for a long time)

42MF130A/37 shall be designed so that the display enclosure can be easily removed from the

base for external mounting applications. When the base is removed, there shall be no additional non-removable parts that are visible from the front of the display

1-6 Environmental Requirements

1-6-1 Temperature Ranges

Operating Temperature……..0°C to 40°C

Storage Temperature…….. ……10°C ~ + 50°C

1-6-2 Humidity

Operating …… 10% ~ 85%

Storage Relative Humidity……5% ~ 85%

1-6-3 Altitude

Operating .... (0 to 3,000 m)

Non-Operating..... .... (0 to 3,000 m)

1-6-4 Vibration and Shock

All testing shall be done in each of three mutually perpendicular axes, referenced to the positionof the system as it is in front of the user (i.e., front-to-back, side-to-side, and top-to-bottom).

2、Precautions and Notices：

2-1 Precaution of assembly

（1）Please do not press or scratch PDP panel surface with anything hard.

（2）Please wipe out PDP panel surface with absorbent cotton or soft cloth in case of it being soiled

（3）Please wipe out drops of adhesive like saliva and water in PDP panel surface immediately. They might damage to cause panel surface variation and color change

（4）Do not apply any strong mechanical shock to the PDP panel

2-2 Precaution of Operation：

（1）Please be sure to unplug the power cord before remove the back-cover. (make sure the power is turn-off)

（2）Please do not change variable resistance settings in PDP MODULE; They are adjusted to the most suitable value. If they are changed, it might happen LUMINANCE does not satisfy.

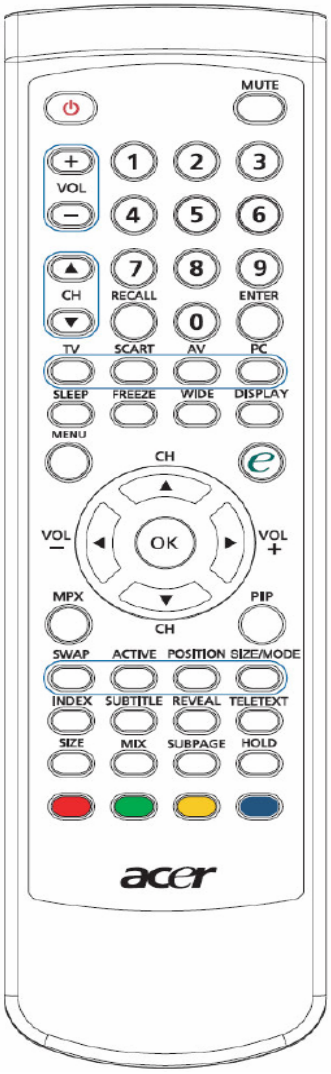
（3）Please consider that PDP MODULE takes longer time to become stable of radiation characteristic in low temperature than in room temperature.

（4）Please pay attention to displaying the same pattern for very long-time. Image might stick on PDP.

3、Operation

3-1 Operation of Remote Control Transmitter

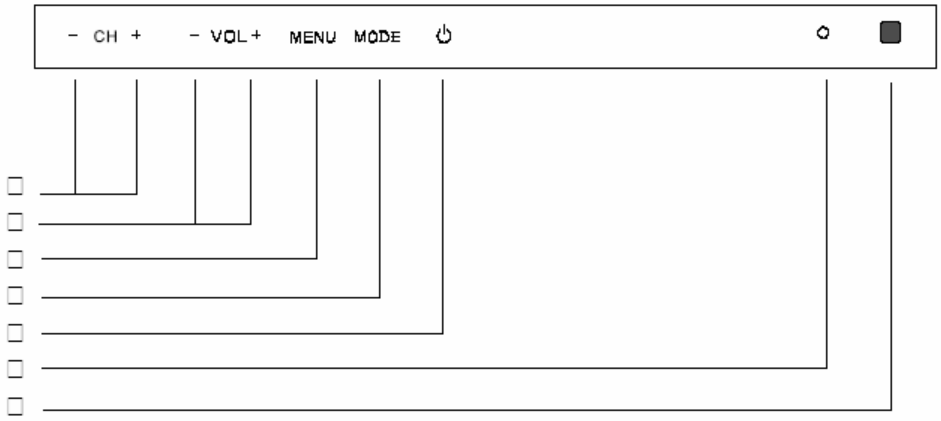
Right	Navigate right in the OSD menu / Volumne down	OSD / Normal
OK	Confirm selection	
Menu	Open/Exit Menu	
E Key		
E (Logo)	Activate Acer empowering feature	
PIP Control		
PIP	Switch among Normal /PIP modes	
Swap	Swap primary and sub screen in toggle	
Active	Toggle the active screen sequentially	
Position	Change position of sub screen in PIP mode right-down / left-down / left-up / right-up	
Size/mode	When PIP mode: Change sub screen size in 37.5% /50% of width and height of full screen	Detail please see 1.2.7 1.2.7 Multi Pictures
Audio key		
MPX	NICAM STEREO Broadcast : Stereo/Mono BILIGUAL Broadcast : Sound 1 / Sound 2 / Mono MONAURAL Broadcast: Mono FM-FM STEREO Broadcast: Stereo/Mono BILINGUAL Broadcast : Sound 1 / Sound 2	
Teletext		
Teletext	when in any possible source which has teletext mode, Turn teletext mode on/off	
Hold	when in teletext pages, press this button temporarily holds the current teletext page	
Size	when in teletext pages, this key Zoom page toggle 1X/2X and page selection by Up-arrow and Down-arrow	
SUBTITLE	Shows/hides subtitles of channel	
INDEX	Press this key will show the index page.	
REVEAL	This is a toggle function key to display hidden	



Key Name	Key Functions	Remark
Normal		
Power	Power On/Off	
Display	1. In TV mode, it will show Channel number/Channel Name (if exist) 2.In other source, it will show the source information	Detail please see 1.2.9 Display
Mute	Sound mute On/Off	
Select input source		
TV	Analog TV	
SCART	SCART1/SCART2/SCART3	
AV	AV4-CVBS/AV4-S Video /Component 1/Component 2	
PC	VGA/DVI	
Related TV control		
Sleep	Sleep Timer Off 15/30/45/60/90/120 (mins)	
Wide	Scaling Mode (4:3 /16:9 /Panorama /Letterbox1/ Letterbox2/ Letterbox3)	
Freeze	Stick the screen image and keep sound going	
Number keys & Channel control keys		
Number key 0~9	In TV mode, select your TV channel by pressing the number key Number 0~9	
Recall	Return to the previous channel	
Enter	Confirm the channel selection with number key	
CH▲	This button will set channel to the N-1 channel in "TV"	
CH ▼	This button will set channel to the N+1 channel in "TV".	
VOL ▲	Increase the volume.	
VOL ▼	Decrease the volume.	
4 direction orient key		
Up	Navigate up in the OSD menu / Chanel up	OSD / Normal
Down	Navigate down in the OSD menu / Chanel down	OSD / Normal
Left	Navigate left in the OSD menu / Volumne up	OSD / Normal

	characters.	
MIX	This is a toggle function key to display TV picture and teletext together or teletext only.	
SUBPAGE	Page number may contain several subpages which are automatically paged in a certain cycle by the TV station. Press this button once. "0001" will be displayed on screen, enter number key (0-9) to look for other subpages . If these is no subpage, "****" will be displayed. To cancel this, press this button again.	
Color keys		
R	Red color button to do teletext operation In Teletext mode.	
G	Green color button to operation teletext In teletext mode	
Y	Yellow color button to operation teletext In teletext mode	
B	Blue color button to operation teletext In teletext mode	

3-2 Key function



①: IR : Remote control receiver. The remote control shall be aimed at the TV to control the TV.

②: LED : Indicator for power and standby status.

③: ⏻: Standby button: press it to turn on/off the TV.

④: MODE :Mode button: press it to enter or exit the main source switch menu.

⑤: MENU :Menu button: Press it to enter or exit the main menu.

⑥: -VOL+:They are used to increase or decrease the volume or tune the volume in the OSD menu.

⑦: -CH+: They are used to select the previous or next channel. Or select channel in the OSD menu.

3-3 OSD Main Explanation

Main Fuction

1. **Press " MENU" key on Remote Control or the front panel to open or close the menu.**
2. **Press "▲▼ " to select an item.**
3. **Press "►" or "Enter" to enter a sub menu item or an enable adjusted item.**

3-3-1 Main Menu

Press the SOURCE button on the remote control to enter the "SOURCE" Menu. Press "▲▼" to switch among TV, AV1,AV2, AV3,AV4, S-Video, Component1/ Component2 , VGA and DVI, Press "Enter" to enter.

TV:Enter the TV function.

AV1/AV2/AV3/AV4:Enter the Scart or AV function.

S-VIDEO:Enter the S-Video function.

Component1/ Component2:Enter the component video function.

VGA:Enter the VGA mode.

DVI:Enter the DVI mode.

Press the Menu button on the remote control or the control panel to enter the main menu. Press “▲▼ ” button to select “SEARCH” menu, “VIDEO” menu, “AUDIO” menu, “TIME” menu, “SETTING” menu ,”SCREEN”menu or “PIP”menu.

Press “►” or “ENTER” button to enter the next level submenu, press “EXIT” button close all the menu.Press “◄” or MENU button to previous level submenu .Press “EXIT”colse all the menu.

3-3-2 Search Menu

In the SEARCH menu, press “►” or “Enter” to enter submenus.

Auto Programme：Scan all TV channels and store them in the memory automatically.

●Auto Search:Press Menu button to display the main menu. Press “►” or “Enter” to enter the next level menu, then press “►” or “Enter” to start automatical searching. Press Exit or menu button to stop searching.

Programe：to manually search for a new channel, the current channel will be overwritten by the searched new channel. For adding a new channel, please set the “storage” to an empty channel, then start manual searching.

Deleted: a

- Storage:the saved serial number of the programme.
- Sound System: Preset TV sound system: D/K、I、B/G 、or L。
- Cable or Air: switch signal among V/UHF、cable.
- Channel No.: to set serial numbers for programs.
- Color System: to select color systems for programs:Auto

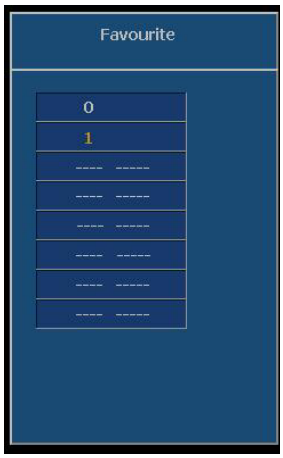
- Manual Search: to manually search a new channel, the current channel will be overwritten by the searched new channel.
  Press Menu button to display the main menu, use"CH+/ CH -" to select a channel. Press "►" or "Enter"to enter the next level menu, and use "CH+/ CH -" to select "Manual Search", then press "►" or "Enter" to start manual searching.
- Fine: to finely tune the current channel to get better images.
- Name:Channel name.

Deleted: use "

Deleted: use "

Programme Edit： Press"►" or "Enter"to Display "To Set",press "Enter"into edit. see the right picture.(Press Red button on remote control to delete. Press Green button to Copy. Press Yellow button to Move. Press cyan button to skip

Favourite Prog.：Press "►" or "Enter"enter Favorite Menu or Press the "FAVORITE" button on the remote control.preset you the favorite channel number, press"Enter"to storage.



Press Menu button to display the menu, use "▲▼ " to select an item. Press "►" or "Enter" to adjust the value of the selected item. Press Exit to return to the previous level menu and press Menu again to exit the menu.

3-3-3 Video Menu

Video Mode: switch picture among Dynamic、Standard、Mild、Game、User。

Color Temp: Color temperature select，Cool、Normal、 Warm 、User、Red、Green、 Blue adjust.

Color Adjust:Set color parameter adjust.

Contrast: To adjust the contrast ratio 0 ~ 100 Adjust

Brightness: To adjust the brightness 0 ~ 100 Adjust

Colour: Color chroma adjust 0 ~ 100 Adjust

Sharpness: To adjust the sharpness, 0 ~ 100 adjust.

Tint: To adjust color phase,to make the image change to red or green (Only for NTSC) 0 ~ 100 Adjust

Press Menu button to display the menu, use “▲▼ ” to select an item. Press “►” or “Enter” to adust the value of the selected item. Press Exit to return to the previous level menu and press Menu again to exit the menu.

3-3-4 Audio Menu

Audio Mode: Switch Audio Mode among Flat、Music、Movie、Sports、User.

Subwoof: not supported.

Balance: Adjust the AUDIO level difference between the left and right speakers

L50 ~ 0 ~ R50 Adjust

Treble: Adjust the treble sound 0 ~ 100 Adjust

Bass: Adjust the bass sound 0 ~ 100 Adjust

TV Speaker: Switch Internal /External speaker

Press Menu button to display the menu, use “▲▼ ” to select an item. Press“►” or “Enter” to adjust the value of the selected item. Press Exit to return to the previous level menu and press Menu again to exit the menu.

Deleted: use “

3-3-5 Time Menu

Clock: Set the current time.

Off Time: The time for power Off.

ON Time:The channel shall be displayed when power on time is up.

Press Menu button to display the menu, use “▲▼ ” to select an item. Press “►” or “Enter” to adust the value of the selected item. Press Exit to return to the previous level menu and press Menu again to exit the menu.

3-3-6 Setting Menu

Language: to select a language for menu: English, Français,Deutsch, Español,Italiano.

Video Output: Can not selected.

Child Lock: On/ Off lock. Select ON , lock the keypad, at the same time the screen is be blanked, you must input your password.

Change Password: Need password to change settings,initial Default password is:888888

Press Menu button to display the menu, use “▲▼ ” to select an item. Press “►” or “Enter” to adust the value of the selected item. Press Exit to return to the previous level menu and press Menu again to exit the menu.

3-3-7 Screen Menu

Auto Config.: Auto adjust the H/V position,H/V size and the phase.

Manual Config.: Manual adjust phase clock and H/V position.

(The above two functions are enabled only when D-SUB.DVI input is used).

ARC: Adjust display ratio(VGA、DVI、 component1/2 are not enabled.

Cinema: ON/OFF 3:2 pull down mode.

NR: Noise reduce adjust 0→1→2 step.

Reset: Reset default value about the H/V position,H/V size and the phase(just be used at D-SUB,DVI source.)

Press Menu button to display the menu, use “▲▼ ” to select an item. Press “►” or “Enter” to adust the value of the selected item. Press Exit to return to the previous level menu and press Menu again to exit the menu.

3-3-8 Pip Menu

INPUT: switch main signal among TV, AV1,AV2,AV3,AV4, S-Video, Component1/ Component2 , VGA and. DVI.

PIP:Switch the PIP function ON/OFF.

(press the “SWAP”key under the “PIP”situation ,if the main picture can’t be small picture,turn small picture into the main picture,press the “PIP”key on remote control to enter it .

PIP INPUT: press“◄►” select the PIP source or press the “PIP SOUR”key on remote control to swith the small picture.

WIN.POSITION:press“◄►” select the PIP window position or press the “PIP POS”key on remote control to move the PIP window.

● PIP: Picture In Picture mode

After entering the PIP mode,the sound will follow the main picture,user can transmite the sound to sub picture through press the”***”key to highlight the PDP mode.

Press“SWAP” key ,user can exchange between the main and sub picture.

3-8-1-1 PIP Input Mode

INPUT			Main Input									
	Signal type		TV	Scart1 RGB	Scart2 RGB	Scart3 RGB	CVBS(S)	S-VHS (S)	Component 1	Component 2	PC Analog	DVI
		OSD Name	TV	AV 1	AV 2	AV 3	AV 4	S_Video	Component 1	Component 2	VGA	DVI
PIP Input	TV	TV	5 // 4	4 // 5	4 // 5	4 // 5	5 // 4	5 // 4	3 // 4	3 // 4	1 // 4	2 // 5
	Scart1 RGB	AV 1	5 // 4				5 // 4	5 // 4	3 // 4	3 // 4	1 // 4	
	Scart2 RGB	AV 2	5 // 4				5 // 4	5 // 4	3 // 4	3 // 4	1 // 4	
	Scart3 RGB	AV 3	5 // 4				5 // 4	5 // 4	3 // 4	3 // 4	1 // 4	
	CVBS (Side)	AV 4	4 // 5	4 // 5	4 // 5	4 // 5			3 // 4	3 // 4	1 // 4	2 // 5
	S-VHS (Side)	S_Video	4 // 5	4 // 5	4 // 5	4 // 5						2 // 5
	Component 1	Component 1	4 // 3	4 // 3	4 // 3	4 // 3	4 // 3					2 // 3
	Component 2	Component 2	4 // 3	4 // 3	4 // 3	4 // 3	4 // 3					2 // 3
	PC Analog	VGA	4 // 1	4 // 1	4 // 1	4 // 1	4 // 1					2 // 1
	DVI	DVI	5 // 2				5 // 2	5 // 2	3 // 2	3 // 2	1 // 2	

3-8-1-2 PIP Function Table List

1 : TRIDENT SCALER PC RGB ANALOG INPUT

2 : TRIDENT SCALER 24 BIT DIGITAL INPUT

3 : TRIDENT SCALER YPbPr ANALOG INPUT

4 : TV SIGNAL AND SCART RGB --> SAA7117 --> 8BIT DIGITAL INPUT

5 : AV SIGNAL --> TRIDENT SCALER AV INPUT PORT

4、Trouble shooting chart

If replace “IMAGE BOARD”, Please re-do “DDC writing” program & “WHITE-BALANCE” & Flash Update.

If replace PANEL module, Please re-do “white-balance adjust”

4-1 PANEL Trouble shooting

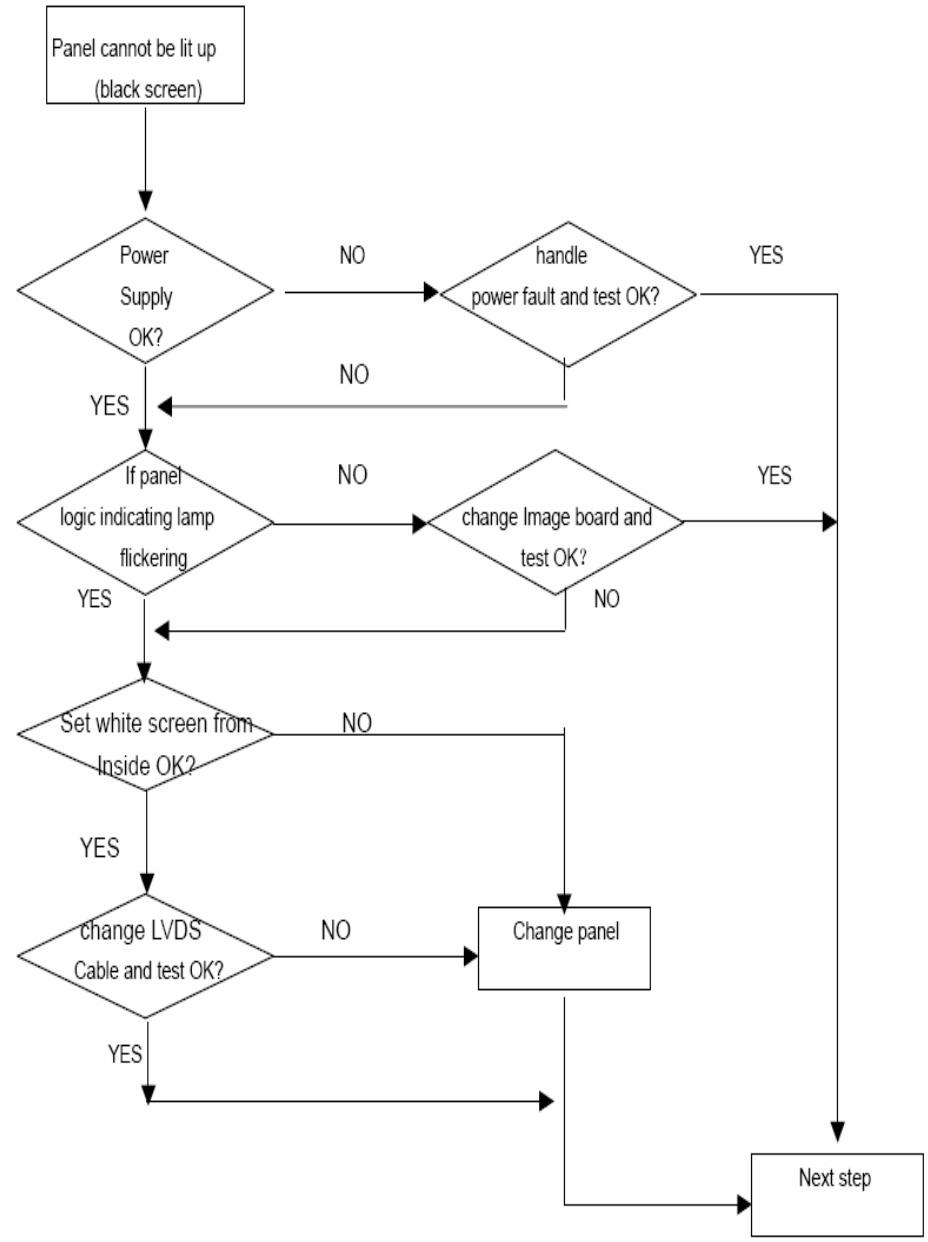
Please reference the “PANEL Service Manual”.

4-2 Solution process of MGPC

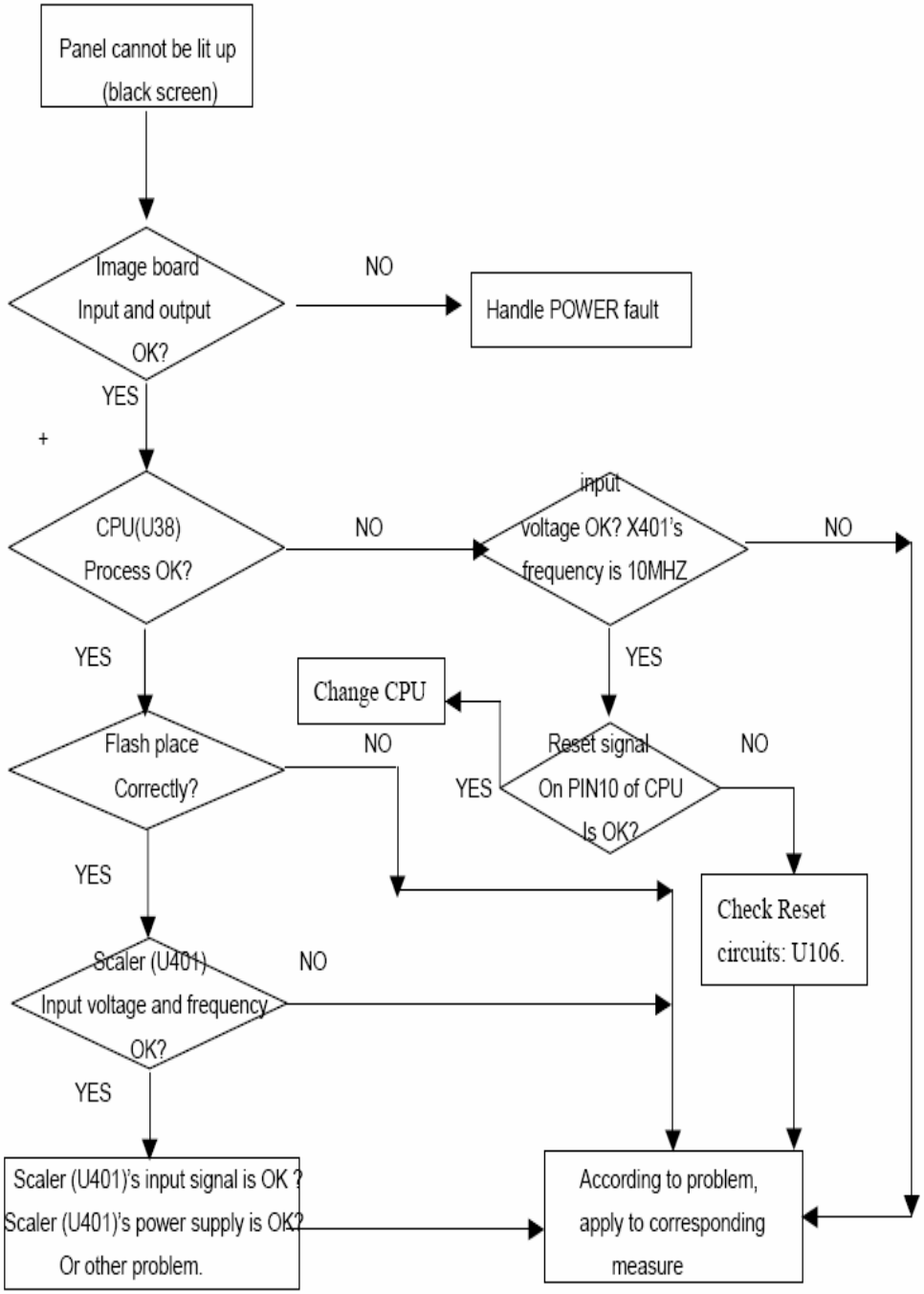
If change new Image board, it is necessary to refresh DDC and readjust white balance.

4-2-1 Panel cannot be lit up

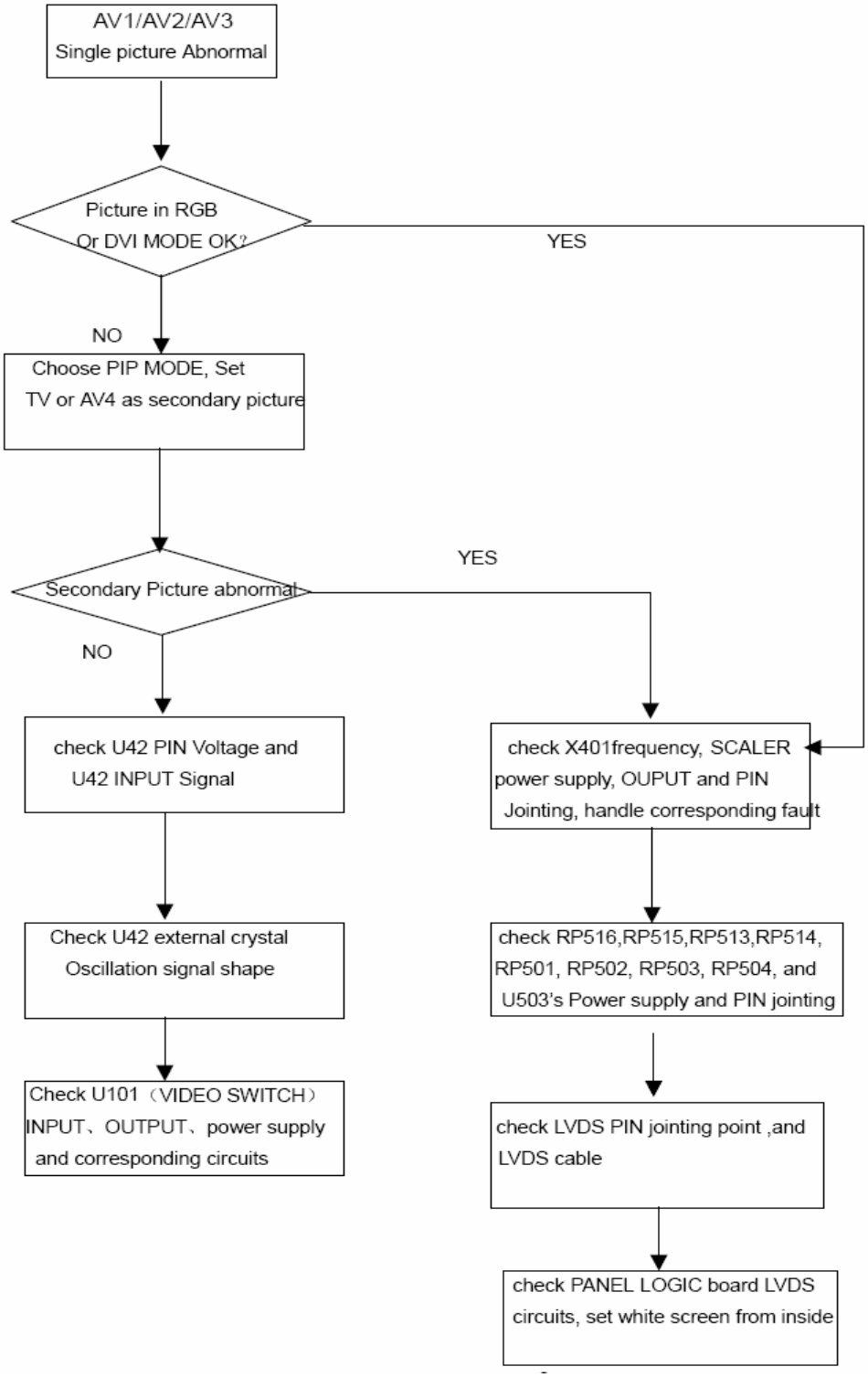
4-2-1-1 Check peripheral circuits procedure



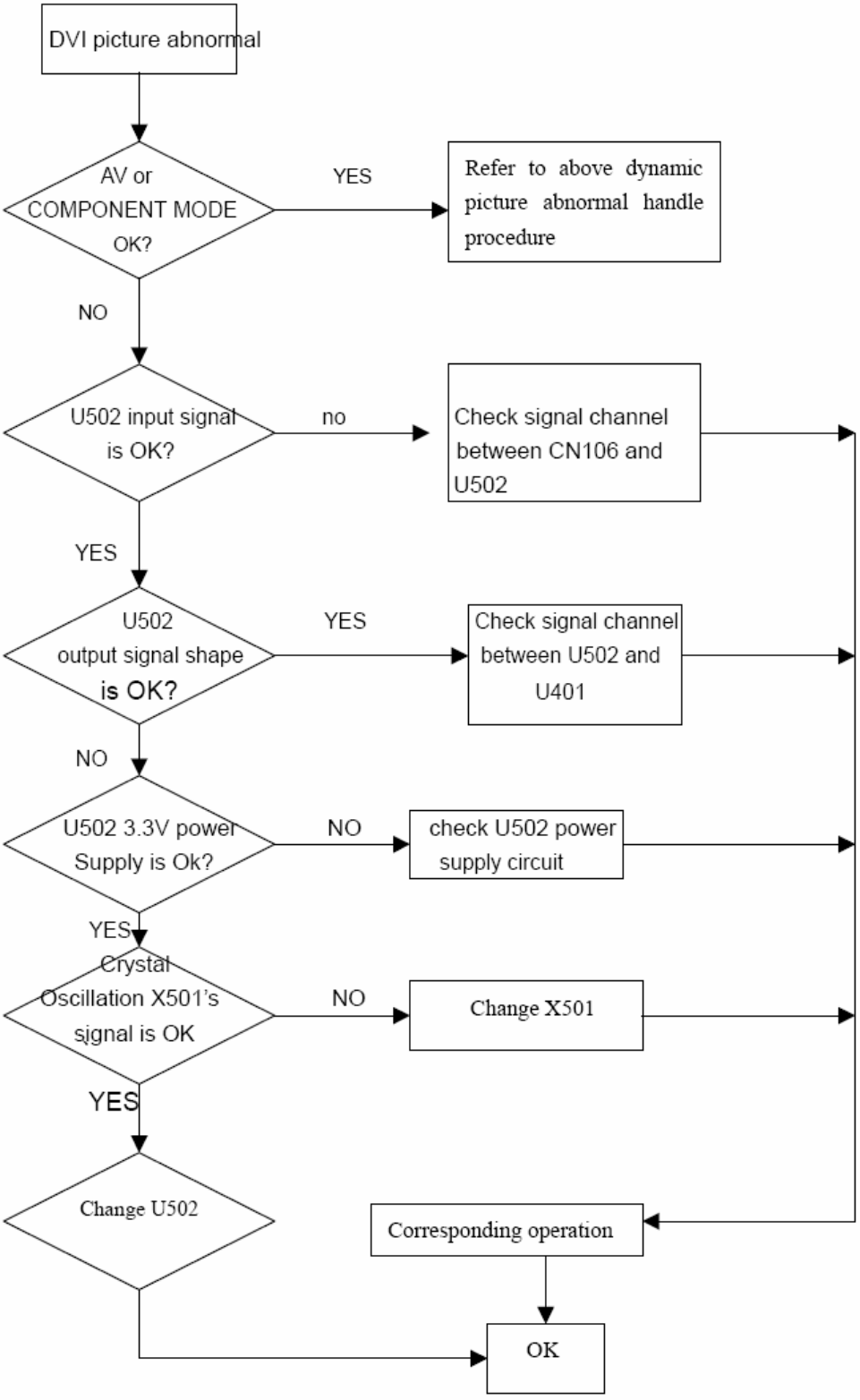
4-2-1-2 Check Image board procedure



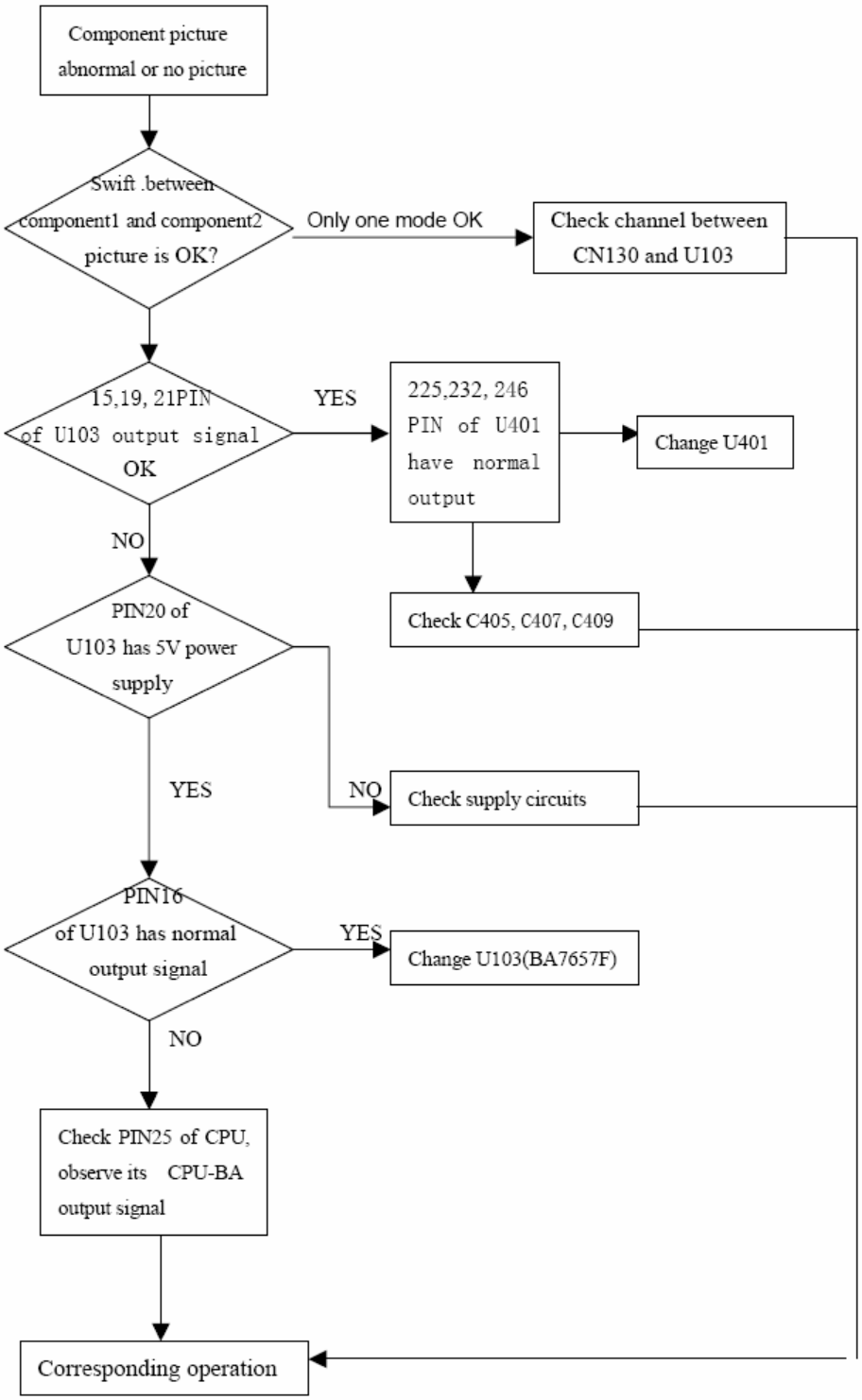
4-2-2 Picture Display --Dynamic picture abnormal



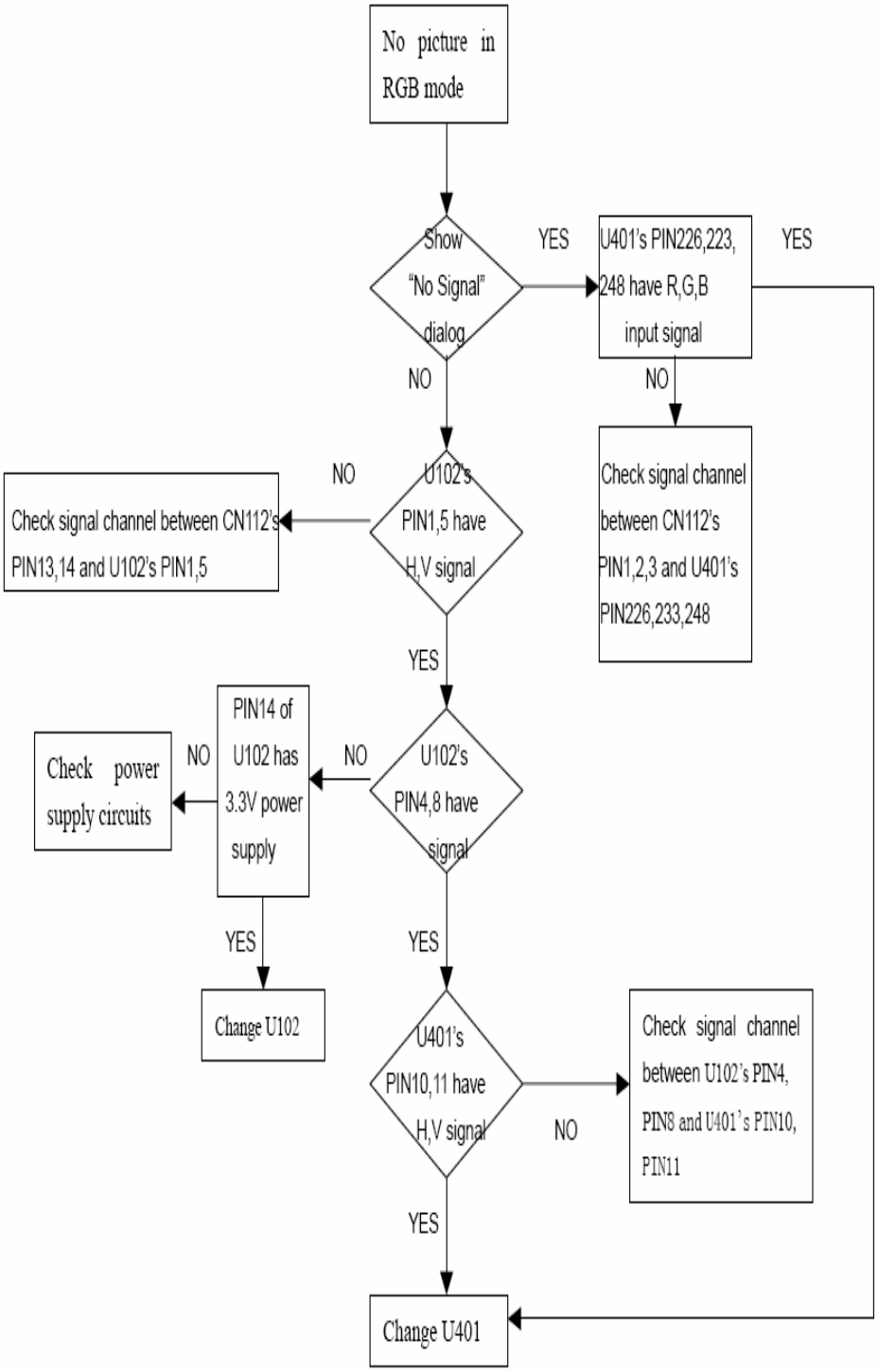
4-2-3 DVI picture abnormal



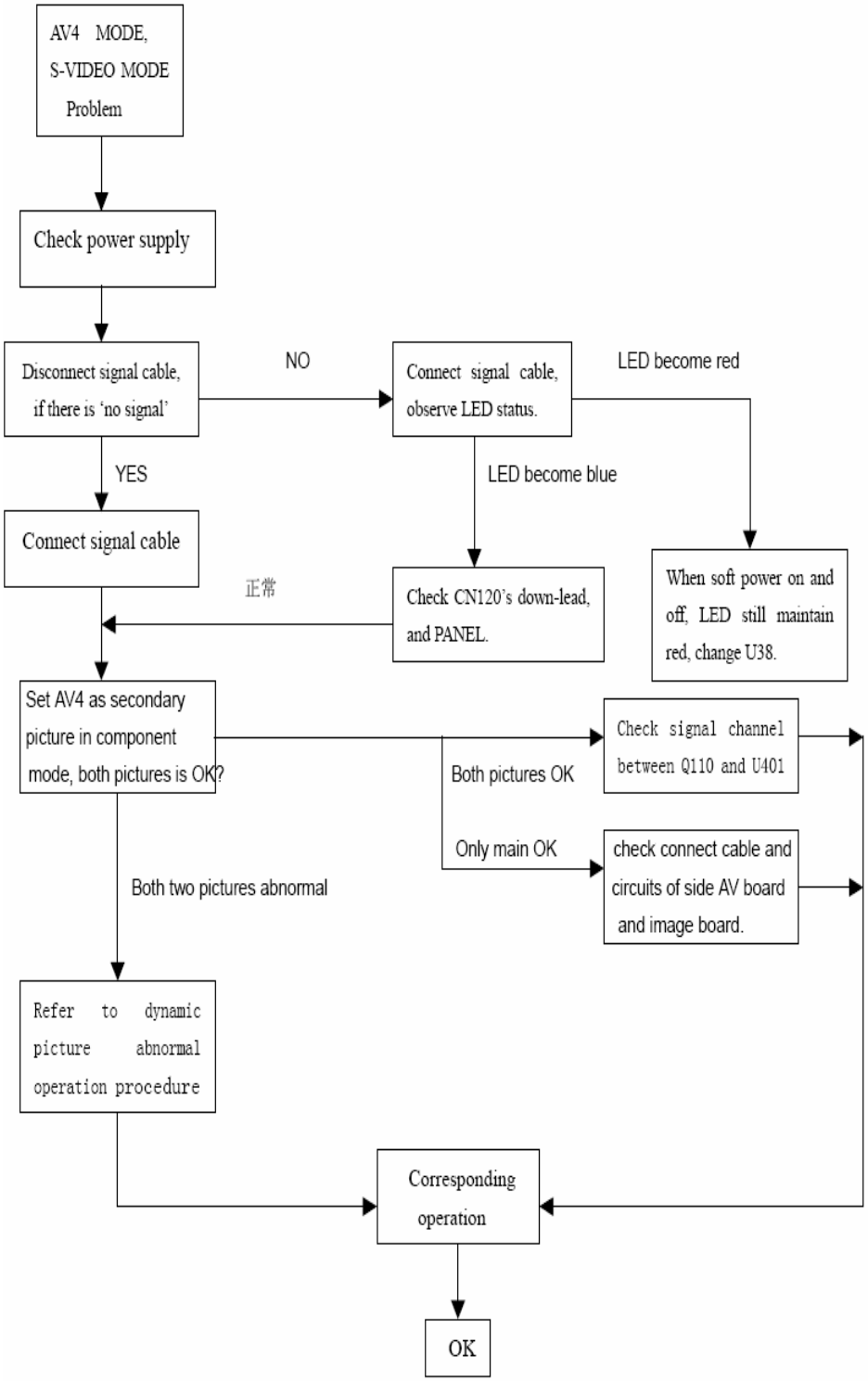
4-2-4 Component picture abnormal



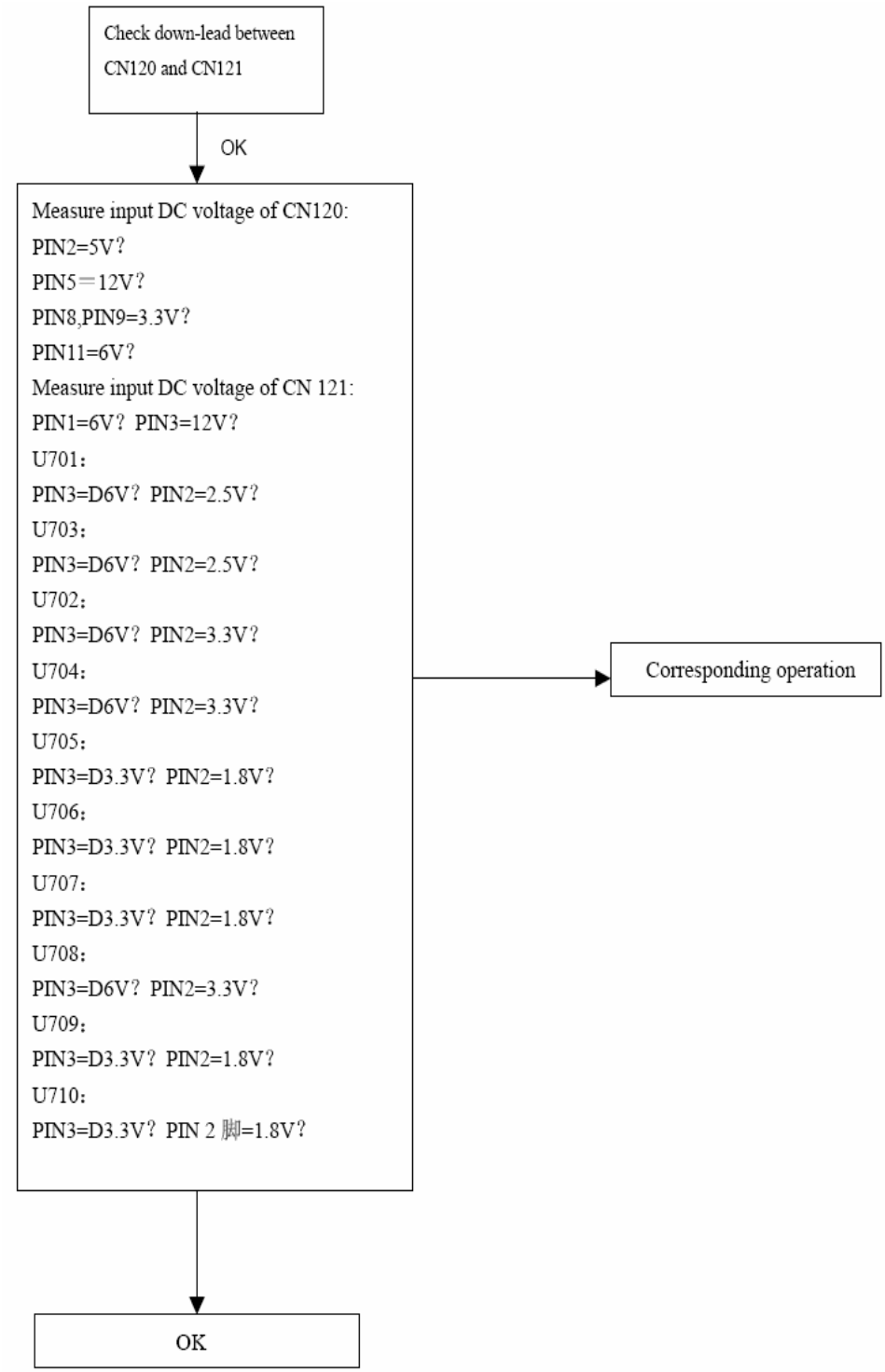
4-2-5 RGB Picture Abnormal



4-2-6 Video Picture Abnormal

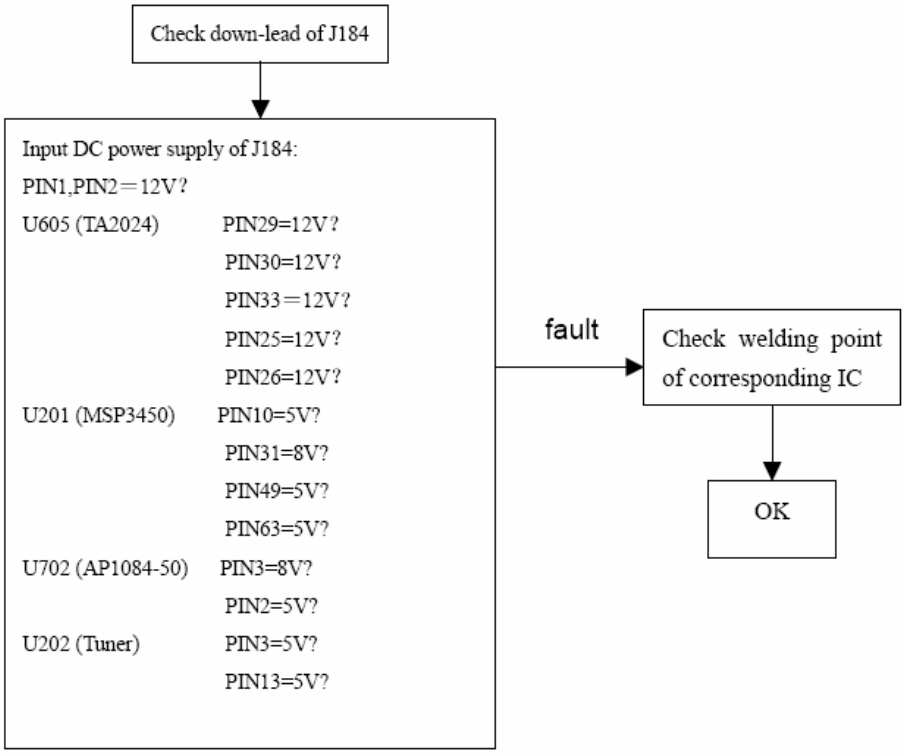


4-2-7 DC Power Supply

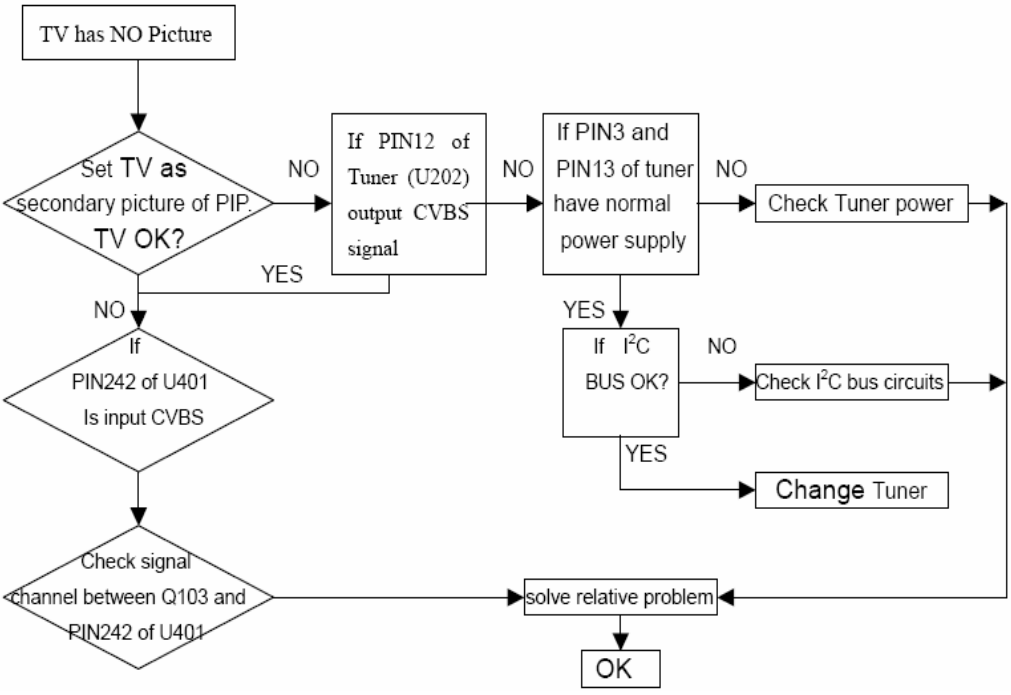


4-3 TUNER＆AUDIO BOARD FAULTS HANDLING

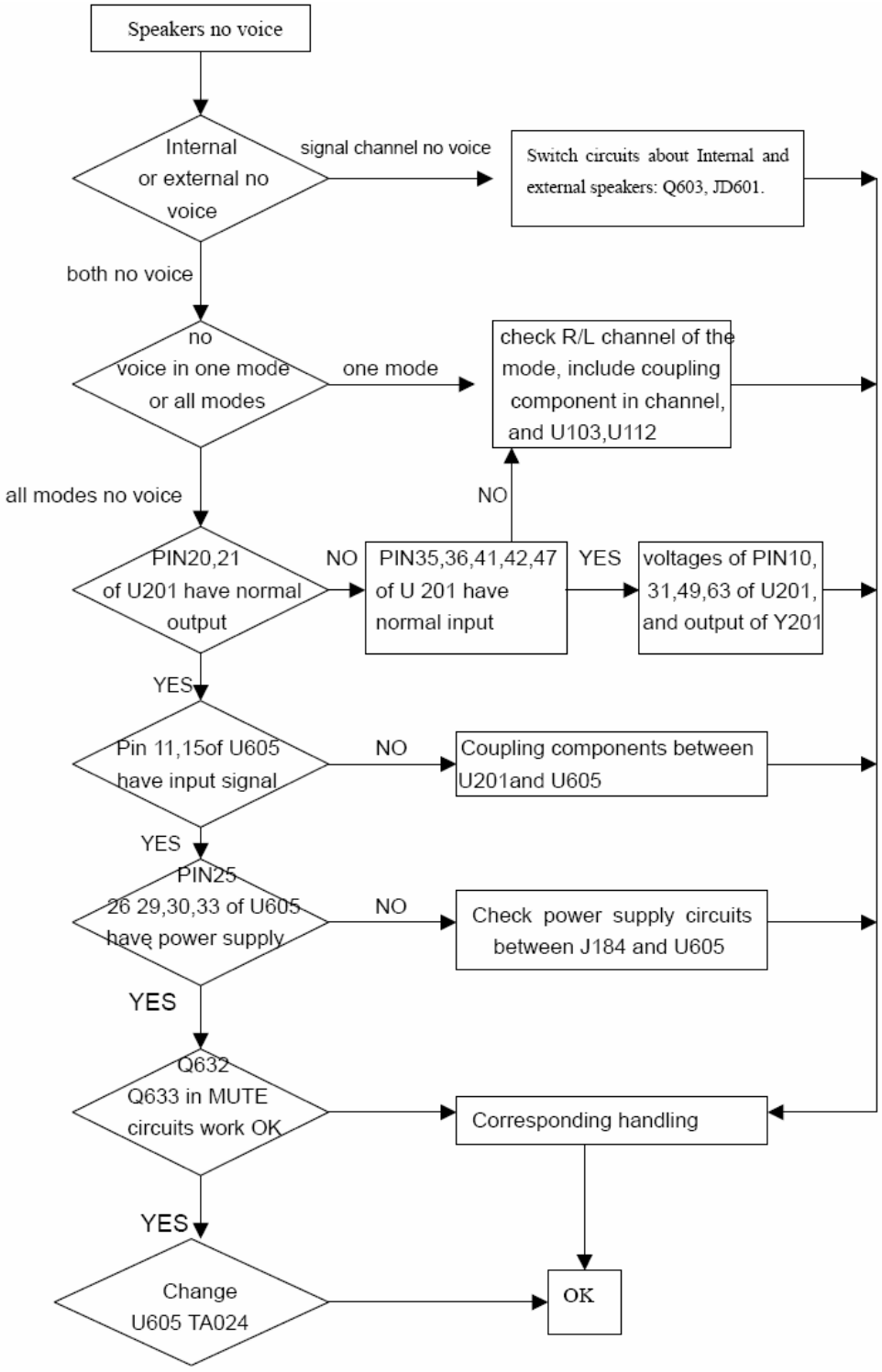
4-3-1 Check DC Power Supply



4-3-2 Tuner Faults Handling



4-3-3 Tuner＆Audio Board Faults Handling



5、White-Balance Adjustment

5-1 Equipments list

Chroma7100 1set

VG828 video signal generator 1set

Chroma-2326 1set

5-2 Preparation and Adjustment process

1、 Preparation:

- Connect rear Video port of PDP with AV port of VG-828.
- Connect component port of PDP with YPbPr port of VG-828
- Connect VGA port of PDP with corresponding port of Chrom2326
- Turn power of PDP and test instrument on.
- Before open lens, Press O-CAL of Chrom-7100 and revise lens.

2、Adjustment process

DVI Mode

1.1 Set Pattern generator to 640X480(60) DVI output and 70% white screen pattern.

1.2 Set OSD picture standard value.

1.3 Used remote control to entry factory mode, adjust Red gain, Green gain, Blue gain value in “white balance page” and make Chroma 7100 x, y value into color temperature spec and Y value to maximum. (Standard: x = 295±10, y = 305±10)

1.4 Set Pattern generator to 640X480(60) DVI output and 32 Gray scale pattern.

1.5 Used remote control to entry factory mode, adjust Green offset value and Green gain value in “white balance page” to make 32 gray scale pattern can be distinguished 28 gray scale at least, and the most darkness level is totally dark, and make sure the most brightness two level can be distinguished

1.6 Set Pattern generator to 640X480(60) DVI output and 20% white screen pattern.

1.7 Used remote control to entry factory mode, adjust Red offset, Blue offset value in “white balance page” and make Chroma 7100 x, y value into color temperature spec (Standard: x = 295 ±10, y = 305±10)

1.8 Repeat step 1.3 to 1.7 until 70% & 20% white screen pattern x, y value in spec.

RGB Mode:

1.1 Set Pattern generator to 640X480(60) VGA output and 70% white screen pattern.

1.2 Set OSD picture standard value.

1.3 Used remote control to entry factory mode, adjust Red gain, Green gain, Blue gain value in “white

balance page" and make Chroma 7100 x, y value into color temperature spec and Y value to maximum. (Standard: x = 295±10, y = 305±10)

1.4 Set Pattern generator to 640X480(60) VGA output and 32 Gray scale pattern.

1.5 Used remote control to entry factory mode, adjust Green offset value and Green gain value in "white balance page" to make 32 gray scale pattern can be distinguished 28 gray scale at least, and the most darkness level is totally dark, and make sure the most brightness two level can be distinguished

1.6 Set Pattern generator to 640X480(60) VGA output and 20% white screen pattern.

1.7 Used remote control to entry factory mode, adjust Red offset, Blue offset value in "white balance page" and make Chroma 7100 x, y value into color temperature spec (Standard: x = 295±10, y = 305±10)

1.8 Repeat step 2.3 to 2.7 until 70% & 20% white screen pattern x, y value in spec.

Component mode:

1.9 4.1 Set Pattern generator to 480P Component output and 70% white screen pattern.

1.10 Set OSD picture standard value.

1.11 Used remote control to entry factory mode, adjust Red gain, Green gain, Blue gain value in "white balance page" and make Chroma 7100 x, y value into color temperature spec and Y value to maximum. (Standard: x = 295±10, y = 305±10)

1.12 Set Pattern generator to 480P Component and 32 Gray scale pattern.

1.13 Used remote control to entry factory mode, adjust Green offset value and Green gain value in "white balance page" to make 32 gray scale pattern can be distinguished 28 gray scale at least, and the most darkness level is totally dark, and make sure the most brightness two level can be distinguished

1.14 Set Pattern generator to 480P Component output and 20% white screen pattern.

1.15 Used remote control to entry factory mode, adjust Red offset, Blue offset value in "white balance page" and make Chroma 7100 x, y value into color temperature spec (Standard: x = 295±10, y = 305±10)

1.16 Repeat step 4.3 to 4.7 until 70% & 20% white screen pattern x, y value in spec.

Video mode:

1.17 4.1 Set Pattern generator to PAL output and 70% white screen pattern.

1.18 Set OSD picture standard value.

1.19 Used remote control to entry factory mode, adjust Red gain, Green gain, Blue gain value in "white balance page" and make Chroma 7100 x, y value into color temperature spec and Y value to

maximum. (Standard: x = 295±10, y = 305±10)

1.20 Set Pattern generator to PAL output and 32 Gray scale pattern.

1.21 Used remote control to entry factory mode, adjust Green offset value and Green gain value in "white balance page" to make 32 gray scale pattern can be distinguished 28 gray scale at least, and the most darkness level is totally dark, and make sure the most brightness two level can be distinguished

1.22 Set Pattern generator to PAL output and 20% white screen pattern.

1.23 Used remote control to entry factory mode, adjust Red offset, Blue offset value "white balance page" and make Chroma 7100 x, y value into color temperature spec (Standard: x = 295±10, y = 305±10)

1.24 Repeat step 4.3 to 4.7 until 70% & 20% white screen pattern x, y value in spec.

6、DDC program and test

6-1 Equipments list and prepare

DDC tester 1PCS
PC 1SET
D-SUB cable 1PCS
DVI cable 1PCS
Barcode Reader 1SET

Prepare before test:

1. Turn on the power of your PC and programmer, then make good connection of them.
2. Connect the D-SUB wire and DVI wire to the DDC program equipment and the PDP monitor.

6-2 Program and test process

1. Choose different DDC menu according to different customer , do use PAGE DOWN/PAGE UP to go to the submenu and parent menu until find the right model. Press enter to access the program interface. There will be shown RGB on the screen. Then switch to RGB program on the DDC connector。Press any key to access RGB program interface ,then there will be "input serial no.:" prompt on the screen.

2. Use Bar Readers to read the serial no to the program，then make sure the serial no you have read is the same as on the barcode. Then set the PDP to blue screen mode, press enter to start.

3. Watch the information of the program, it means programmed OK when the following interface come out. please CHECK Manufacturer Name、Vendor Assigned Code、Model Name、Serial Number：****[?????????****](same as Barcode)、Week of Manufacture：**、Year of Manufacture：****、Checksum：**（same as the last byte of data table, reference to the note of RGB programming picture）and so on.

4. Press Enter to access RGB DDC test interface，follow the DDC test picture，CHECK Manufacturer Name、Vendor Assigned Code、Model Name、Serial Number：****[?????????****](same as Barcode)、Week of Manufacture：**、Year of Manufacture ****、Video Input：Analog、Checksum：**（same as the last byte of data table, reference to the note of RGB programming picture）and so on.

5. Press any key to access DVI program interface, there will be "DVI" shown on the screen. Switch the of switch on the DDC connector, press any key to access DVI program interface, there will be

"input serial no.:" promote.

6. Use Bar Readers to read the serial no to the program，then make sure the serial no you have read is the same as on the barcode. Then set the PDP to blue screen mode, press enter to start.

7. Watch the information of the program, it means programmed OK when the following interface come out. please CHECK Manufacturer Name、Vendor Assigned Code、Model Name、Serial Number：****[??????????****](same as Barcode)、Week of Manufacture：**、Year of Manufacture：****、Checksum：**（same as the last byte of data table, reference to the note of DVI programming picture）and so on.

8. Press Enter to access DVI DDC test interface，follow the DDC test picture，CHECK Manufacturer Name、Vendor Assigned Code、Model Name、Serial Number：****[??????????****](same as Barcode)、Week of Manufacture：**、Year of Manufacture ****、Video Input：Analog、Checksum：**（same as the last byte of data table, reference to the note of DVI programming picture）and so on。If the recording is failure, check the connection of equipment and record again from the step4.If all of these work does not take work ,please ask IE department for help.

Notice :the "?" and "*" symbol will be changed according to the year of manufacture ,and so on.

7、Flash Update

7-1 The list of Instrument

1、 Prepare 1 piece of RS232 cable（The Pin connection see the Figure-1，If difference, please re-connect the cable）and 1 set of PC.

2、 Connect the RS232 cable with PC and PDP(See the Figure-2).

TO PC 9PIN (Female) Signal Pin		TO ACER PDP 9PIN (Female) Signal Pin
1	◄——►	1 NC
RXD 2	◄——►	2 TXD transmitted date
TXD 3	◄——►	3 RXD received date
DTR 4	◄——►	4 NC
GND 5	◄——►	5 FG frame ground
DSR 6	◄——►	6 NC
RTS 7	◄——►	7 NC
CTS 8	◄——►	8 NC
9	◄——►	9 NC

Figure-1

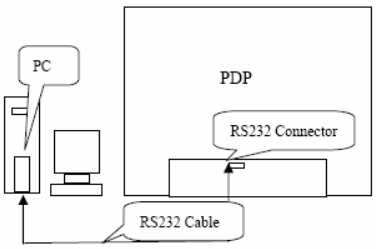


Figure-2

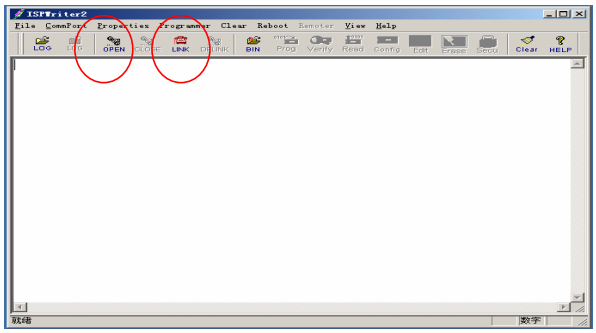
7-2 The operation explaining Flash Update

Note: Operation Under the situation of PDP working normally.

1. Find ISPWriter2.exe file 

in the screen of computer, dblclick it

2. Enter the window, click OPEN，then click LINK.（Like figure 1）



3. Press the AC power switch. It will show the duologue window when PDP and PC connect correct. LED is red(If the connect is not correct，it will retain like figure 1,and the PDP will open, LED is blue) press “confirm”；

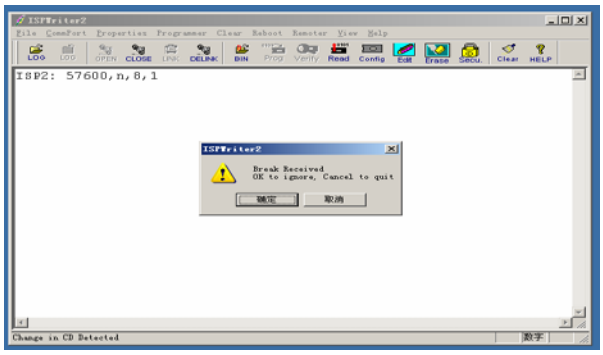


figure 2

4. Click config key, will show duologue window like figure 3:choose the type of Flash at Chip duologue window, if the chip is AMIC ,it will choose MX29LV040，SST should be choose SST29SF040,other option should the same with picture. Then click OK key;

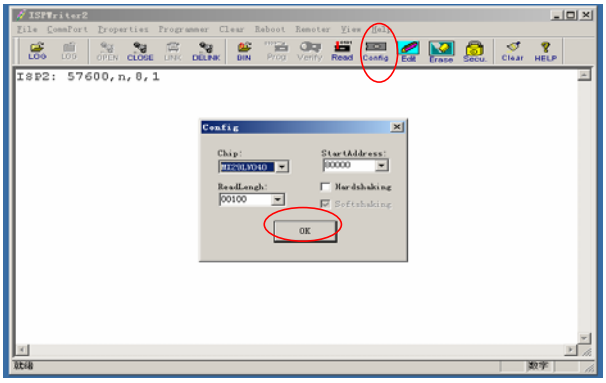


figure 3

5. Click BIN, it will show duologue window as picture 4 ,choose the *.bin file ,click open key

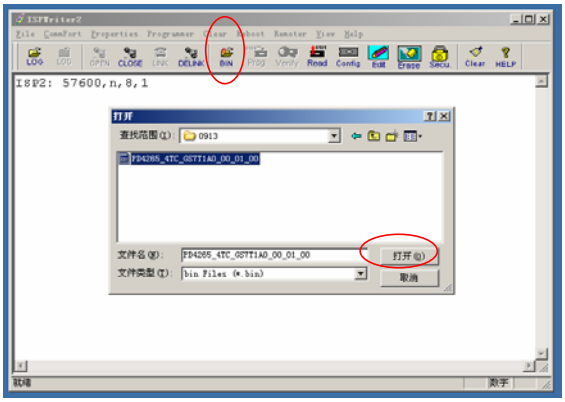


figure 4

5. **Click the Prog key , it will show duologue window as picture 5 ,it start to write he soft ware ,**

6.

RE: It will use about 3 minute to write soft ware, Do not turn-off the PDP during that time;

otherwise it will make the Flash IC break.

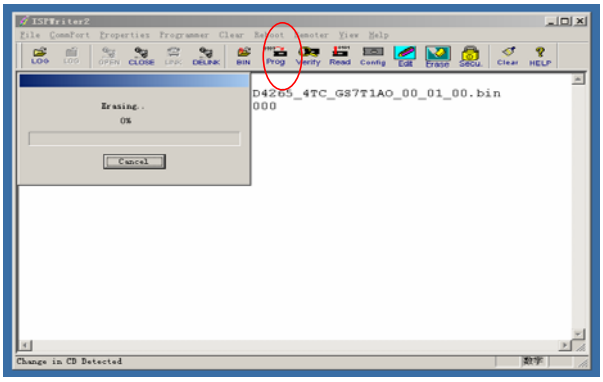


figure 5

7. Finish writing, it will show duologue window as picture 6, it mean end, click OK.

Clicking DELINK key .then CLOSE key exit the programme.

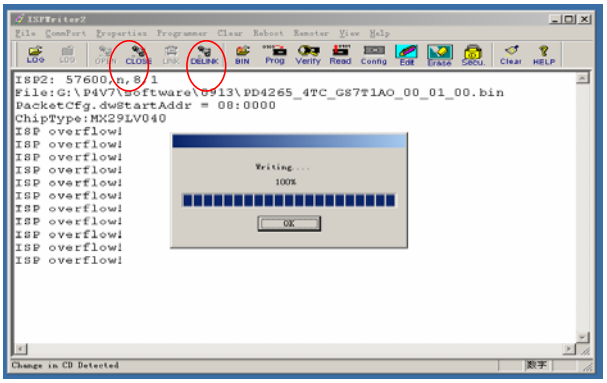
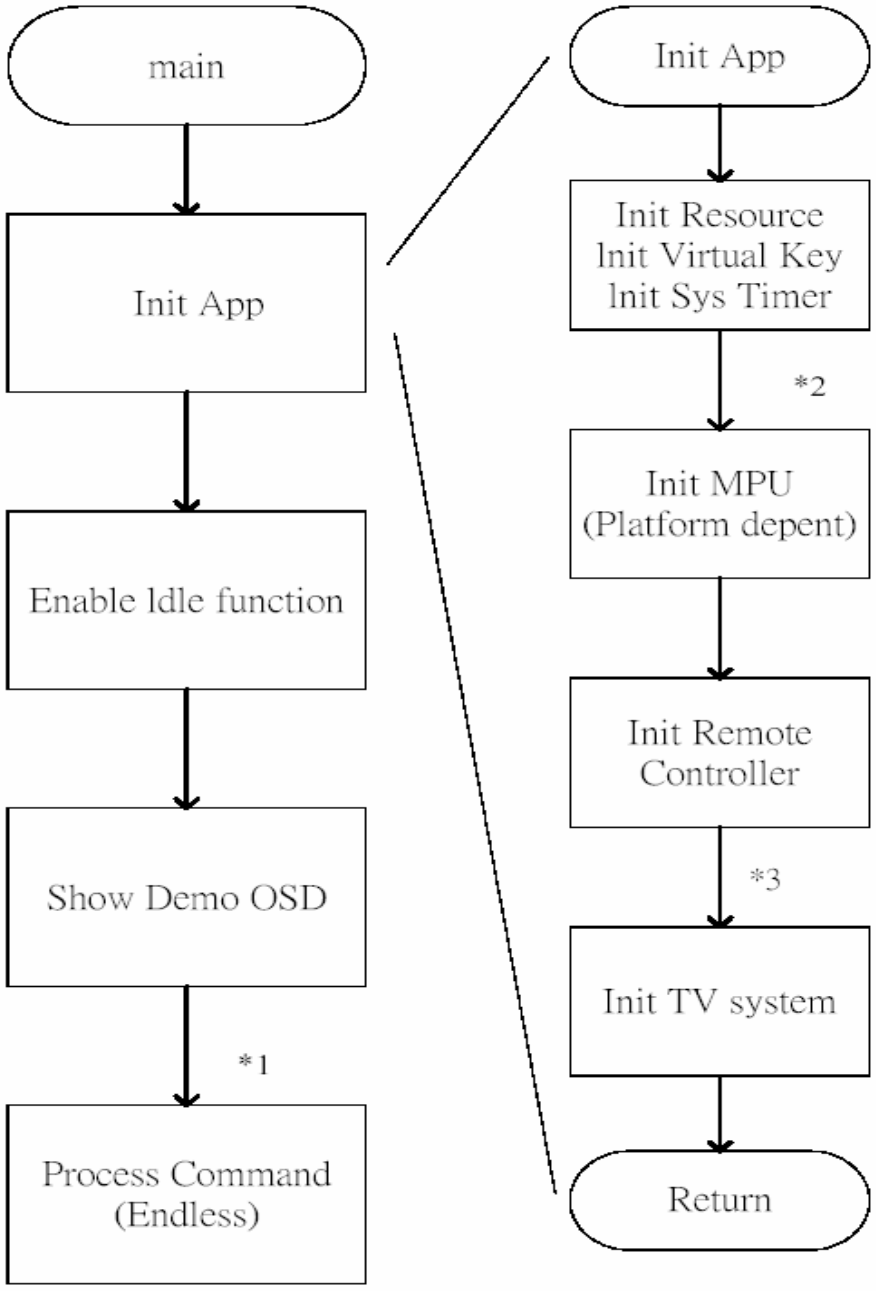


figure 6

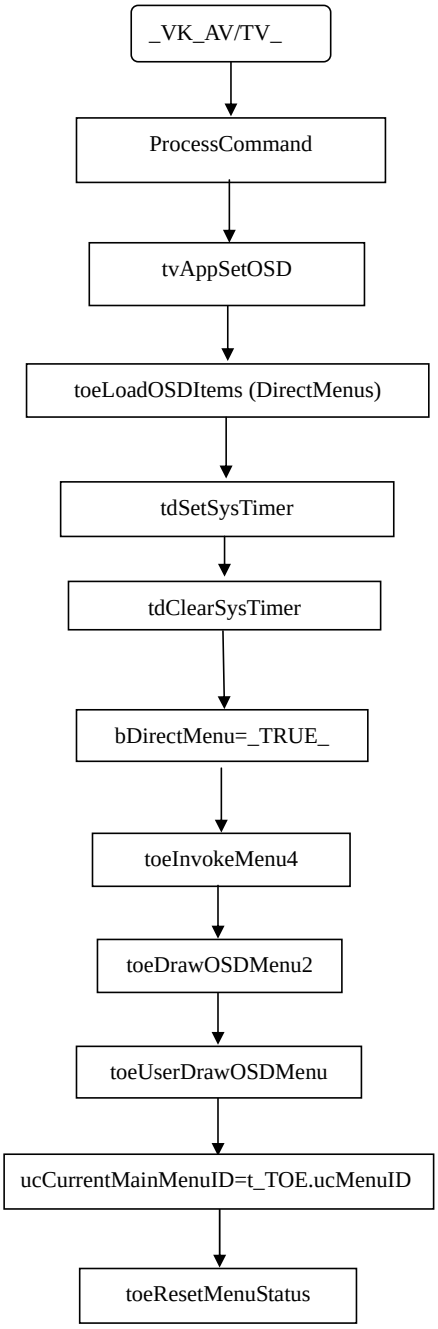
8. Turn-off the PDP. Pull out RS232 wire. then turn-on the PDP and enter factory menu，watch the edition of soft ware whether or not the same with edition of writing.

8、Software Administer Block diagram

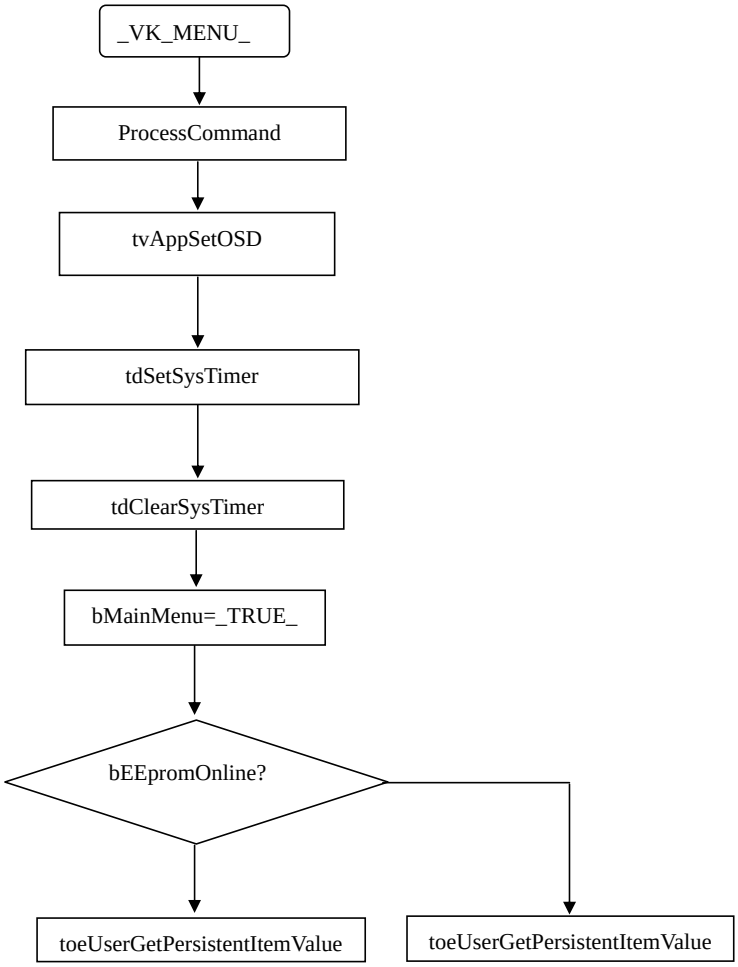
8-1 Main Block diagram （Kernel part）



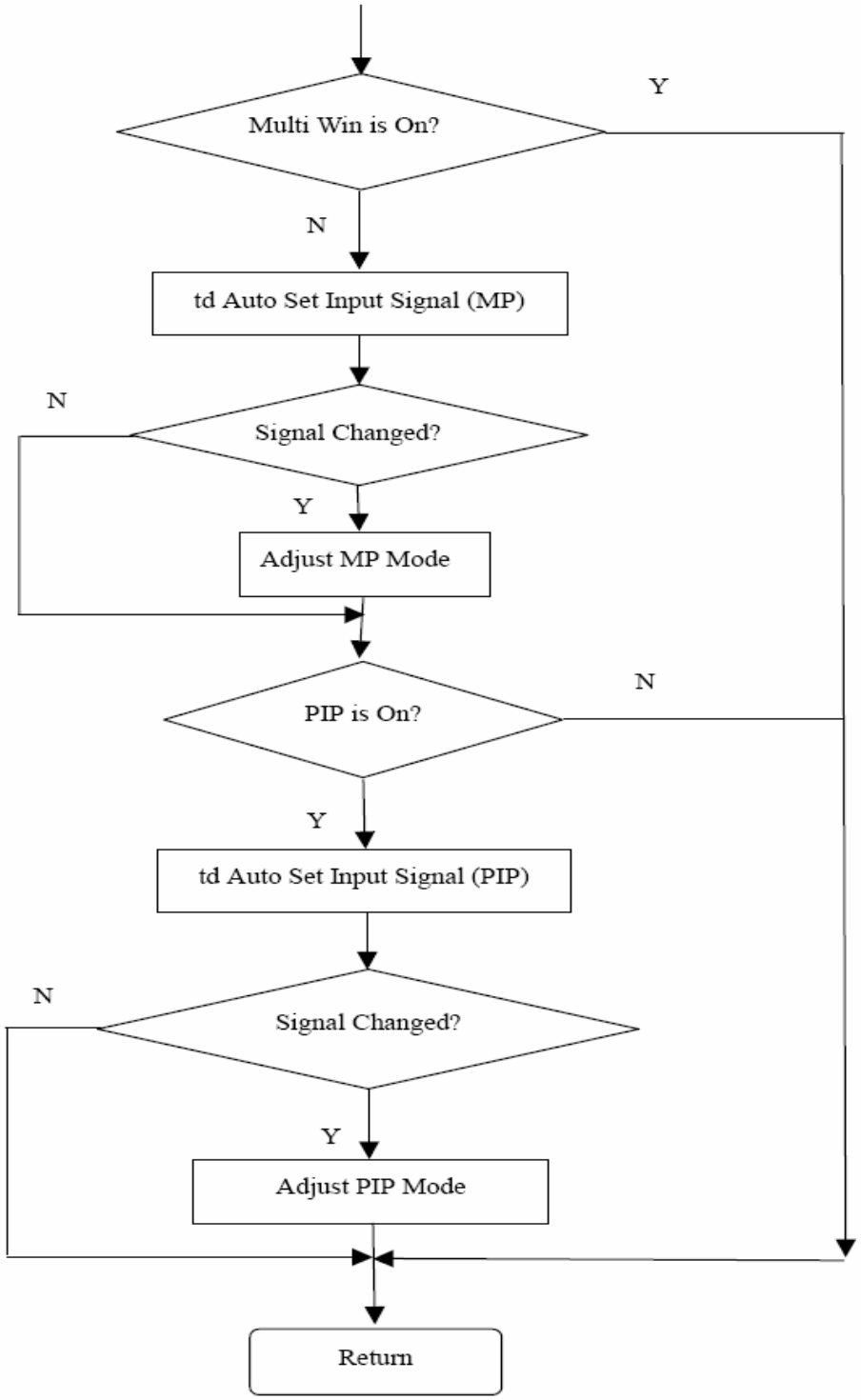
8-2 SOURCE key Block diagram

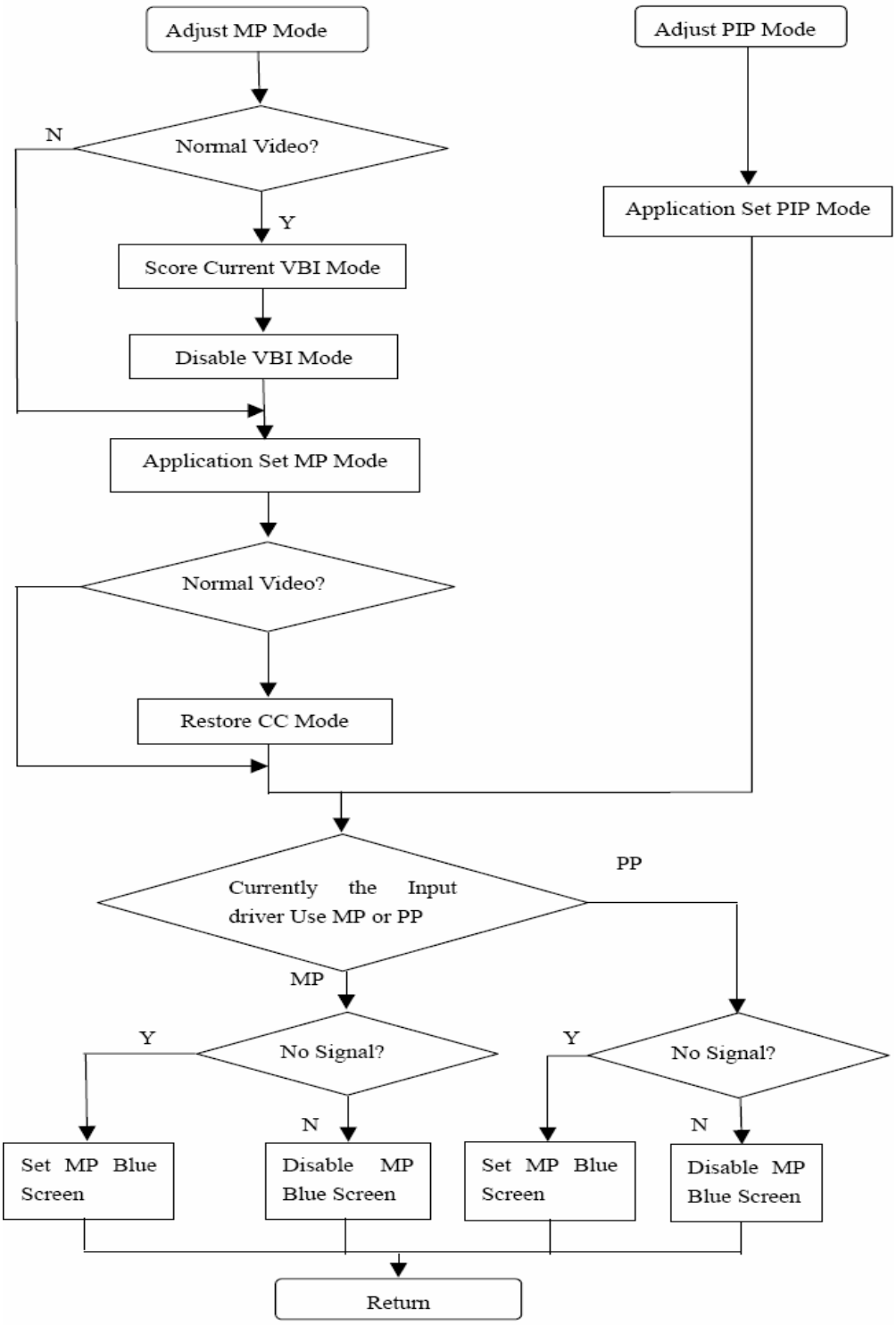


8-3 MENU key Block diagram

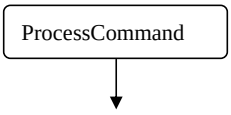


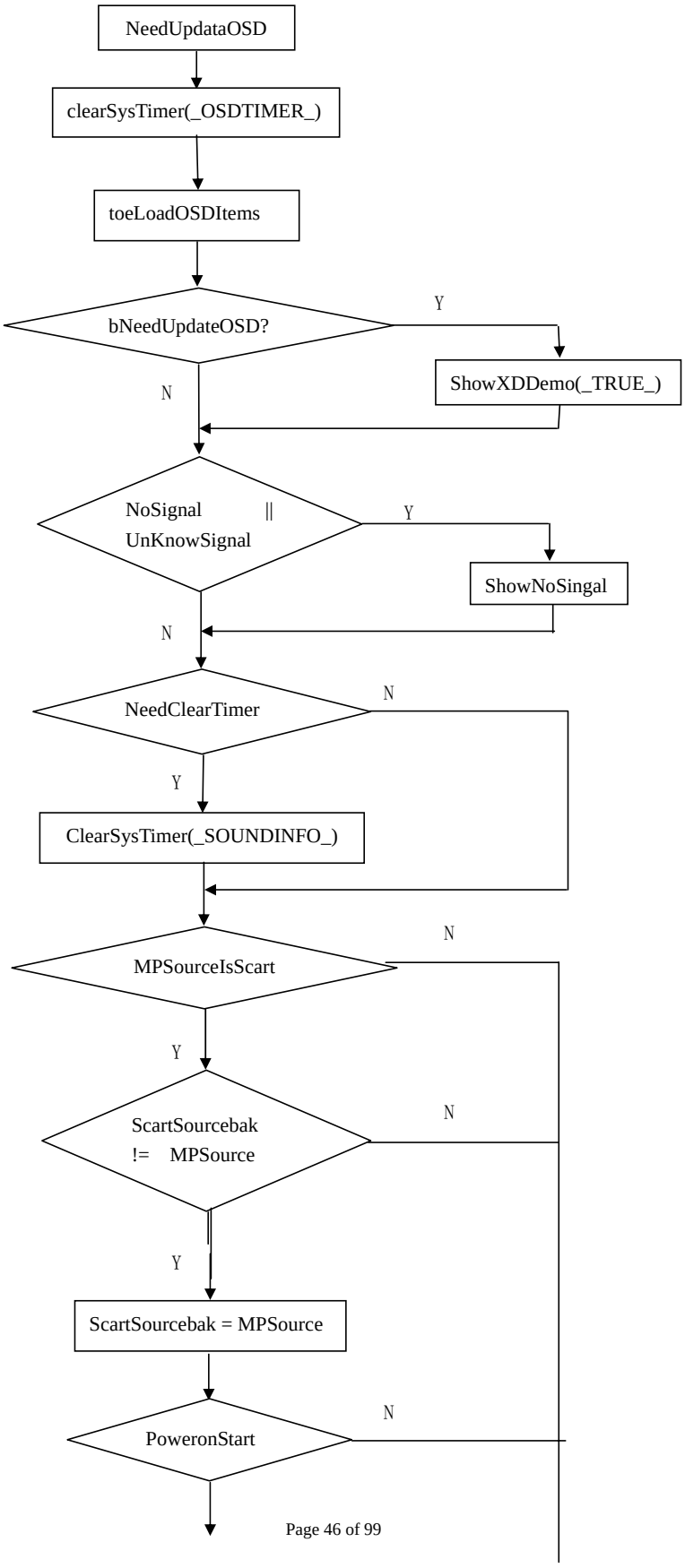
8-4 Mode Check Block diagram

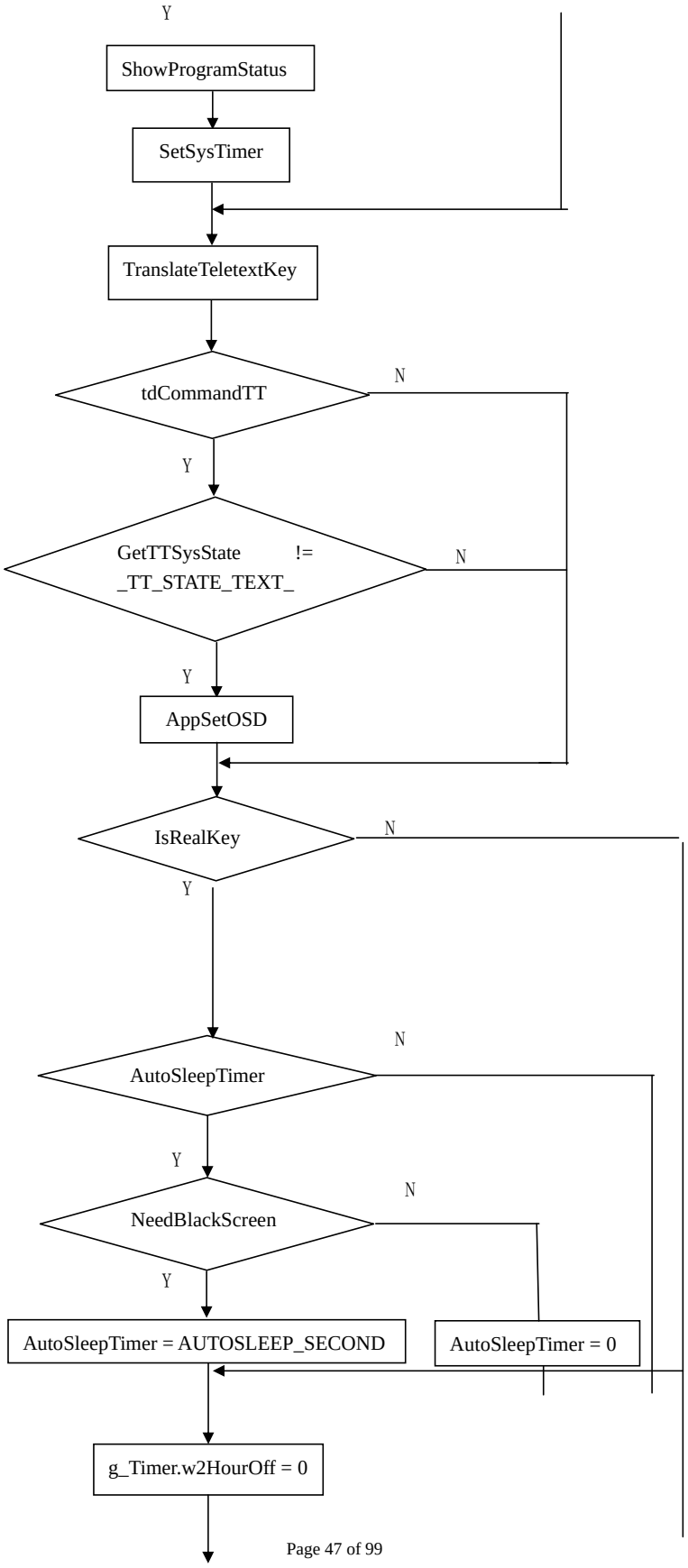


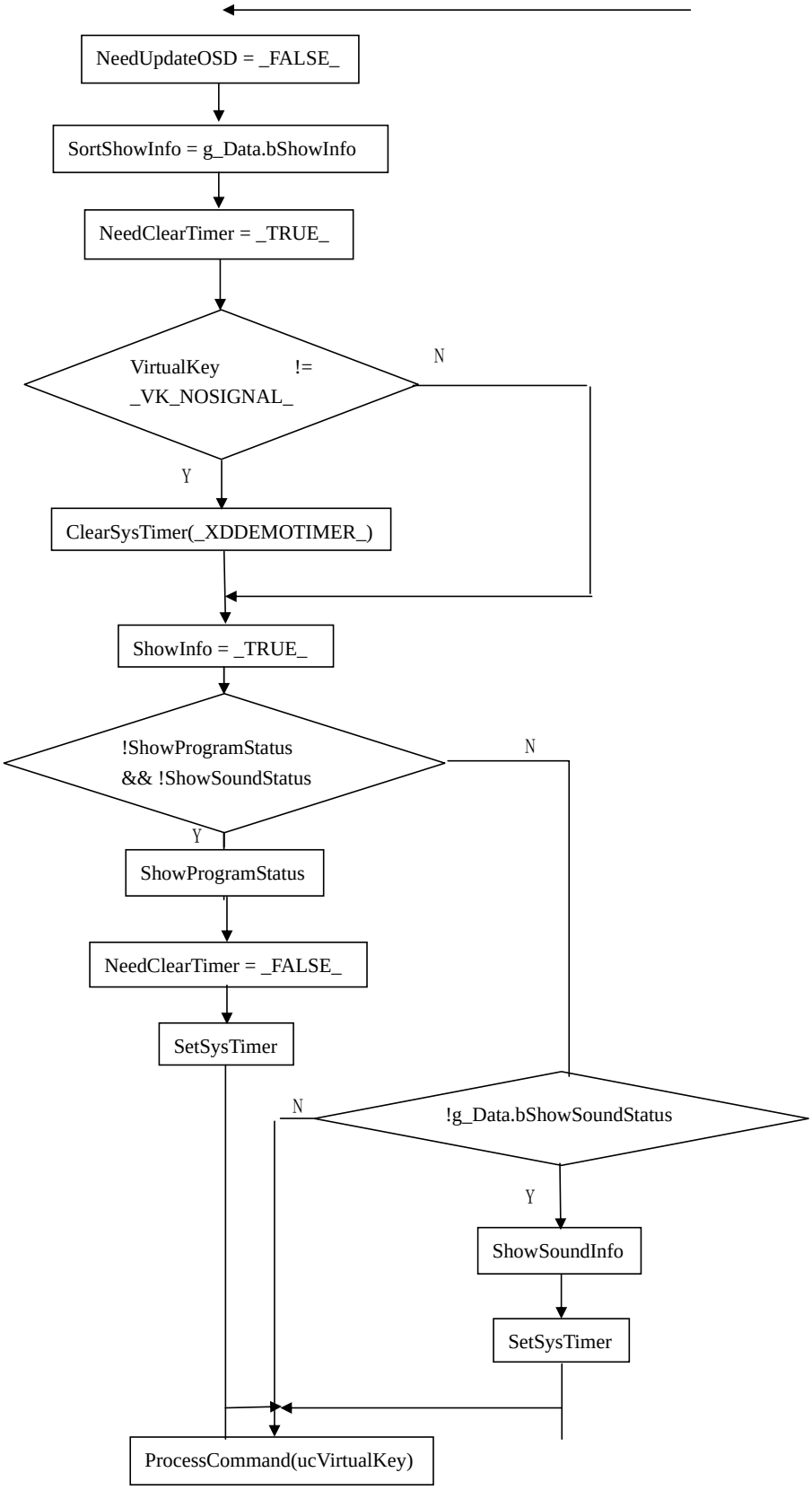


8-5 SCART Key Choose Process



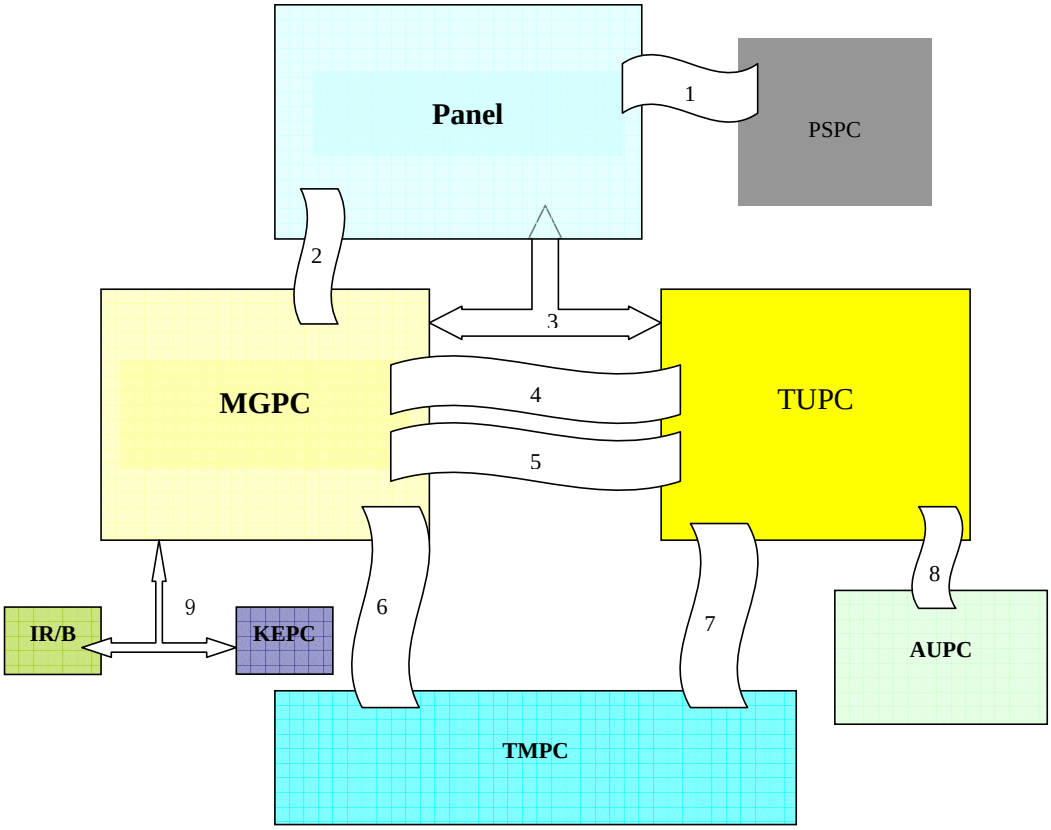

NeedUpdataOSD
clearSysTimer(_OSDTIMER_)
toeLoadOSDItems
bNeedUpdateOSD?
Y
ShowXDDemo(_TRUE_)
N
NoSignal ||
UnKnowSignal
Y
ShowNoSingal
N
NeedClearTimer
N
Y
ClearSysTimer(_SOUNDINFO_)
MPSourceIsScart
N
Y
ScartSourcebak
!= MPSource
N
Y
ScartSourcebak = MPSource
PoweronStart
N


Y
ShowProgramStatus
SetSysTimer
TranslateTeletextKey
tdCommandTT
N
Y
GetTTSysState != _TT_STATE_TEXT_
N
Y
AppSetOSD
IsRealKey
N
Y
AutoSleepTimer
N
Y
NeedBlackScreen
N
Y
AutoSleepTimer = AUTOSLEEP_SECOND
AutoSleepTimer = 0
g_Timer.w2HourOff = 0


NeedUpdateOSD = _FALSE_
SortShowInfo = g_Data.bShowInfo
NeedClearTimer = _TRUE_
VirtualKey != _VK_NOSIGNAL_
N
Y
ClearSysTimer(_XDDEMOTIMER_)
ShowInfo = _TRUE_
!ShowProgramStatus && !ShowSoundStatus
N
Y
ShowProgramStatus
NeedClearTimer = _FALSE_
SetSysTimer
N
!g_Data.bShowSoundStatus
Y
ShowSoundInfo
SetSysTimer
ProcessCommand(ucVirtualKey)

9、Block diagram & Explain

9-1 PDP block diagram and functions



NOTICE:

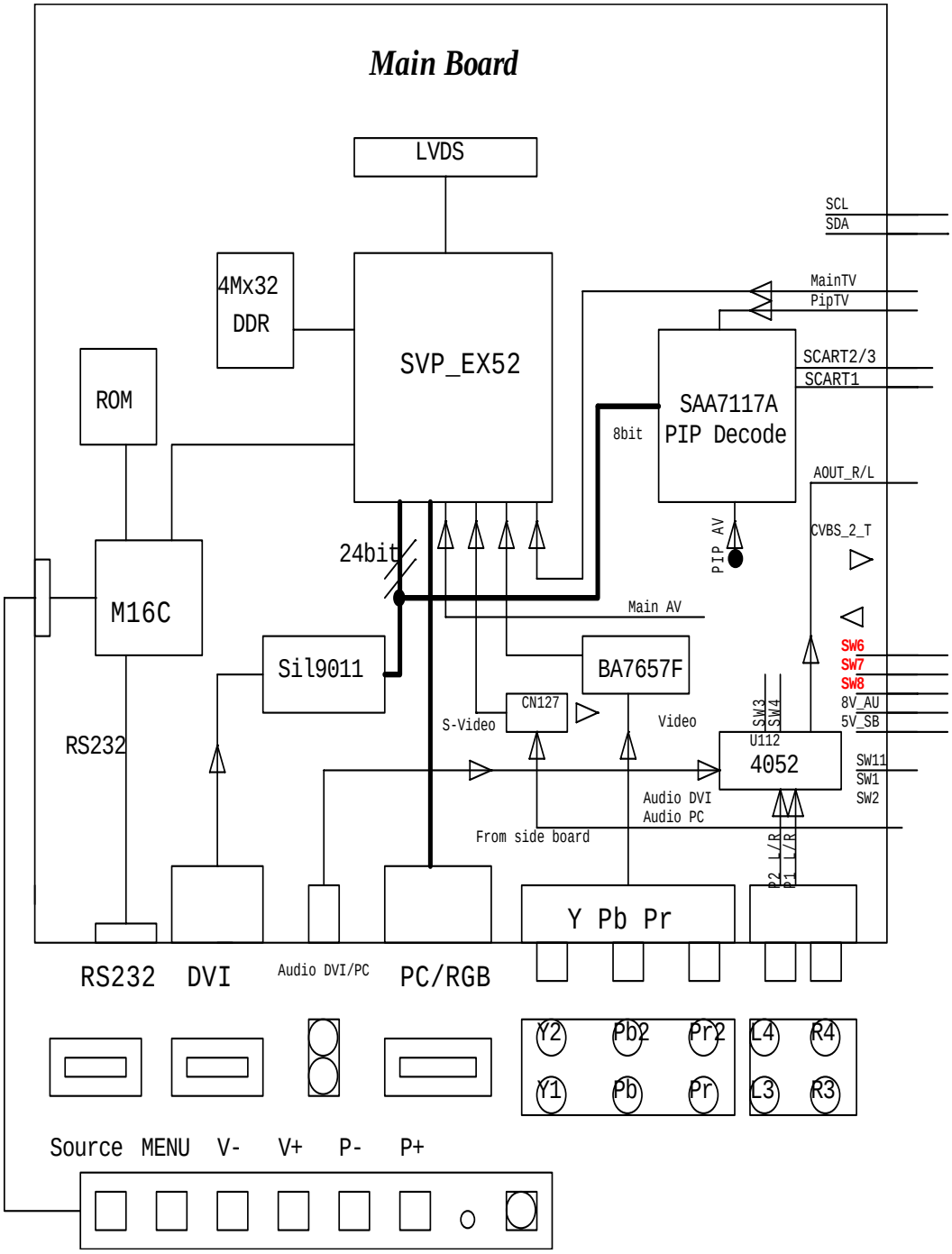
1. Panel P9Z1 TO PANEL CN8001	Power Input Cable.
2. Panel CN8004 TO MGPC CN120	MGPC Power
3. Panel CN8007 TO MGPC CN121&TUPC CN183	MGPC Power&TUPC Power
4. MGPC JP12 to TUPC JP182	MGPC to TUPC Signal
5. MGPC JP13 to TUPC JP183	MGPC to TUPC Signal
6. MGPC CN127 TO TMPC CN127	S-Video & Video Signal
7. TUPC CN670 to TMPC CN210	Video Channel Sound
8. TUPC J602 to AUPC H5Z1	Extrenal Speaker
9. MGPC CN114 to IR P201& KEPC P202	IR&Key

Function of Board:

1) IMAGE Board : Control all input signals, Decode the video signal, De-interlace, and send digital signals (LVDS signal) sent from image Board and display
2) PDC Board: Power Down Control Board
3) SIDE AV Board: The input signal interface
4) Power Board: Supply Power for Panel and Image Board
5) KEY Board: POWER, Signal Source, MENU, CH+, CH - / VOL +, VOL -
6) Power ON /OFF: Turn power on/off

9-2 Image board block diagram and signal introduce

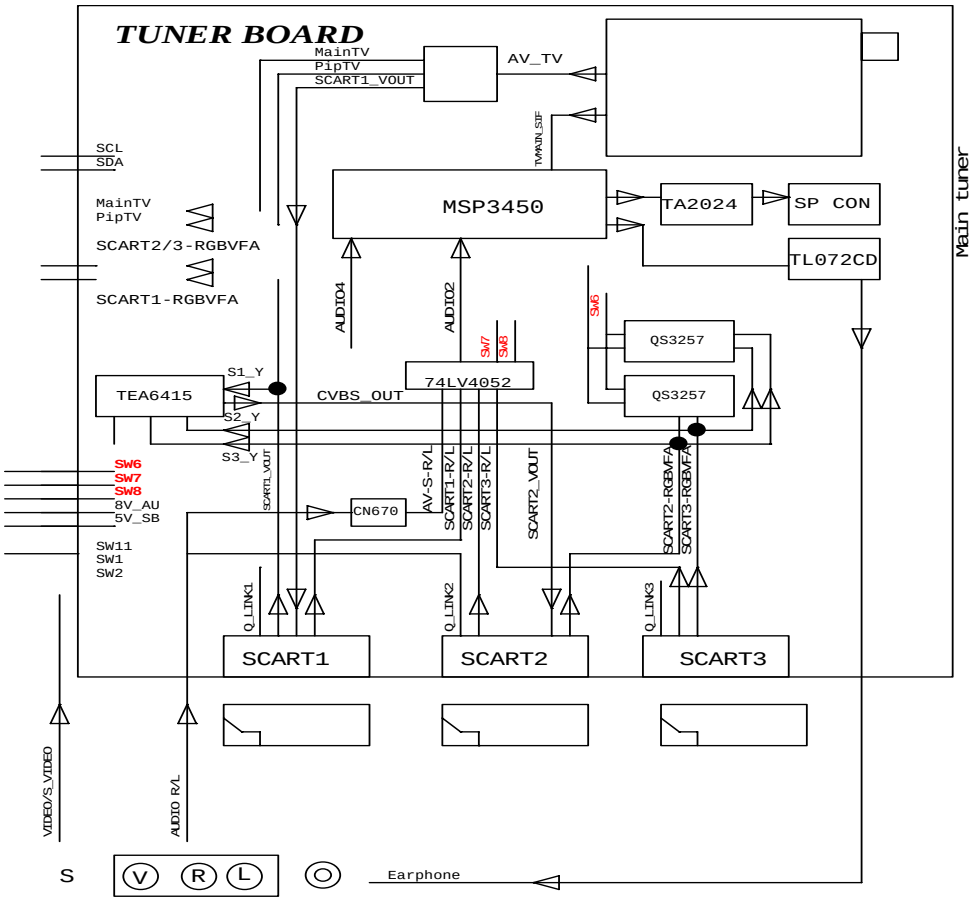
9-2-1 Image board block diagram



9-2-2 Input signal introduce

1. **VIDEO:** transmit bright & chroma signal , it is general ,its picture quality is equal to the general VCD.S-VIDEO transmit the bright and the chroma single, and can reduce/control the cross-interfere , it is better than the Video.
2. **RGB&D-SUB**(Pc interface): general RGB simulative input interface .
3. **YCbCr(NTSC/PAL):** is composed of one bright and two chromatism signals U/V. due to the eye is more sensitive for bright than chroma , RGB via the formulae Y=0.39R+0.50G+0.11B to transform into one bright and two chromatism signals U(R-Y), V(B-Y).
4. **VIDEO**、**S-VIDEO**、**YCBCR**: the frequency 15.6KHZ 50(PAL)/60HZ(NTSC), interleaved simulative signal.
5. **YPbPr:** non-interlaced signal, belong to DTV scope, support 480P,720P,1080i format, current is NTSC.
6. **DVI**：digital Visual Interface, has 29pin（DVI-I）and 25pin (DVI-D), now many top grade display card own it.

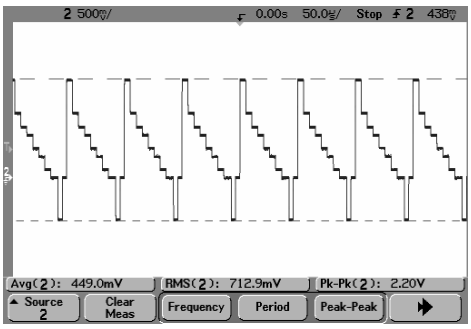
9-3 TUNER board block diagram



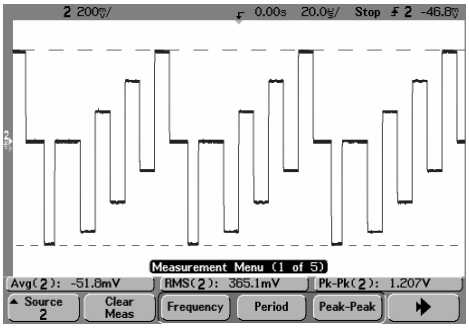
10、Waveform of signal

10-1 Waveform of input signal

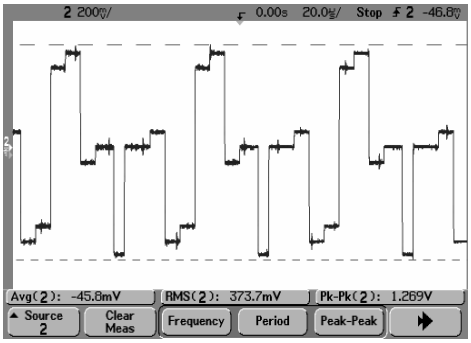
YCbCr: Timing946 Pattern946 color bar picture
Y Luminance Signal



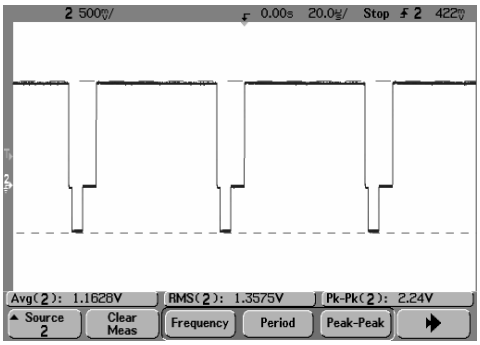
YCbCr: Timing946 Pattern946 color bar picture
Red Signal



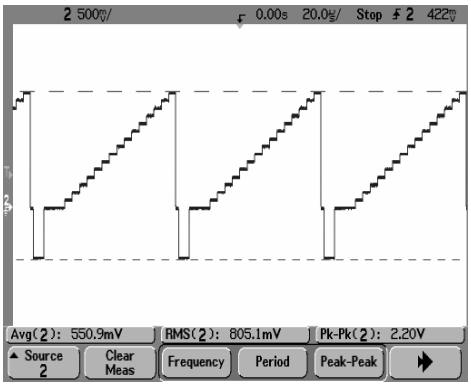
YCbCr: Timing946 Pattern946 color bar picture
Blue Signal



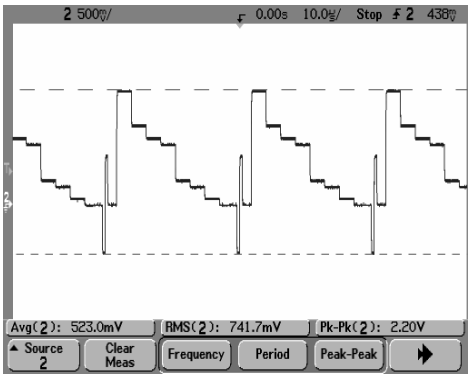
YCbCr: Timing 949 Pattern936 Full White Picture
Y Luminance Signal



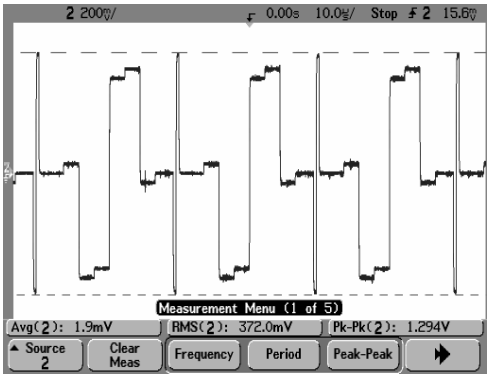
YCbCr: Timing 949 Pattern921 Gray Picture



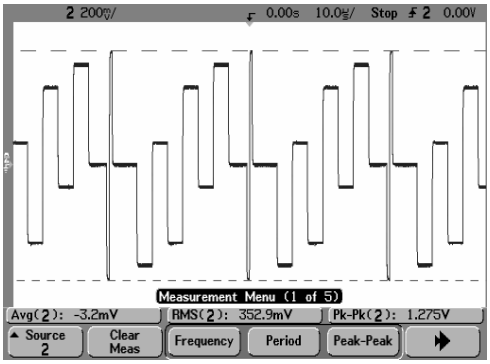
YPbPr:Timing955 Pattern946 color bar picture
Y Luminance Signal



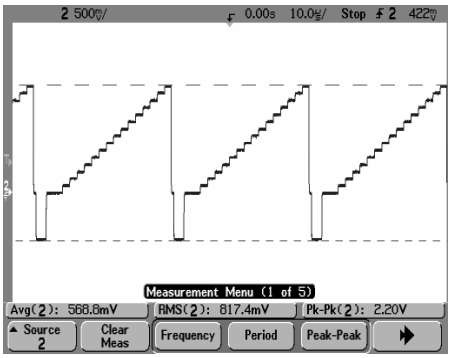
YPbPr:Timing955 Pattern946 color bar picture
Red Signal



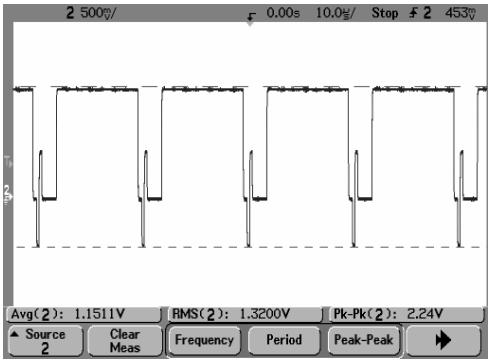
YPbPr:Timing955 Pattern946 Color bar picture
Blue Signal



YPbPr:Timing953 Pattern921 Gray Picture

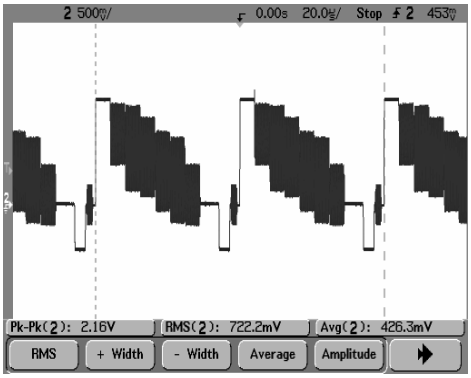


YPbPr:Timing954 Pattern936 Full White Picture

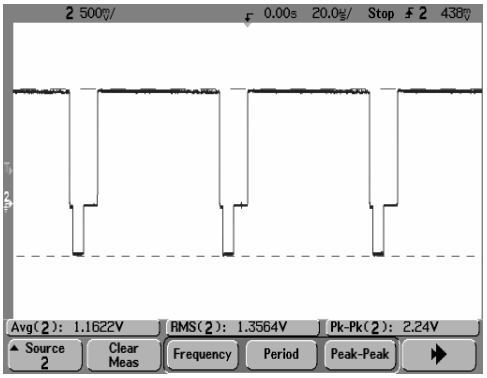


VIDEO

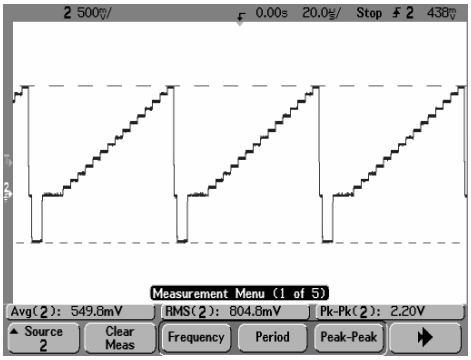
Video: Timing946 Pattern946 Color bar picture



Video: Timing949 Pattern936 Full White Picture

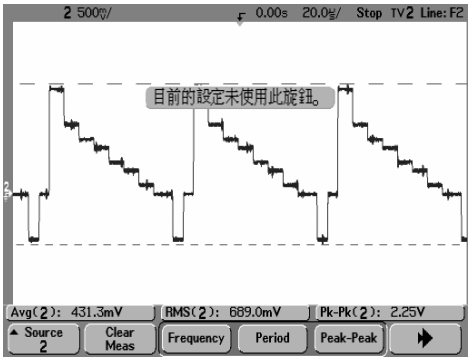


Video: Timing949 Pattern921 Gray Picture

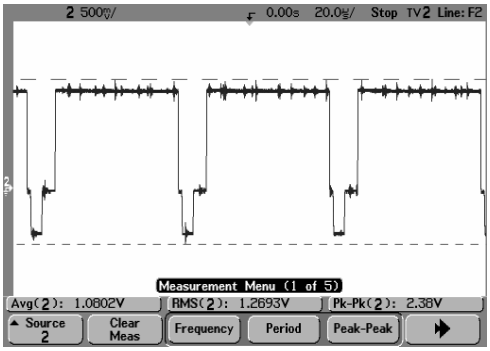


S—VIDEO

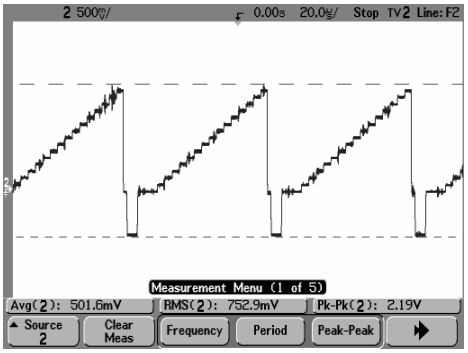
S-video: Timing946 Patern946 Color bar picture



S-video: Timing949 Pattern936 Full White Picture



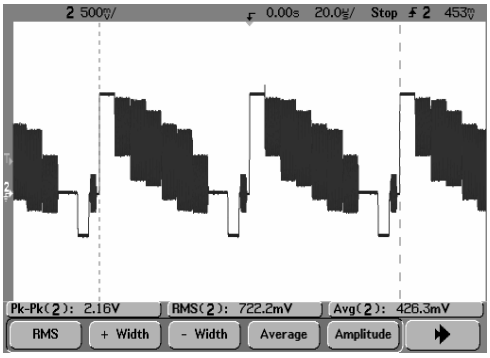
S-video: Timing949 Pattern921 Gray Picture



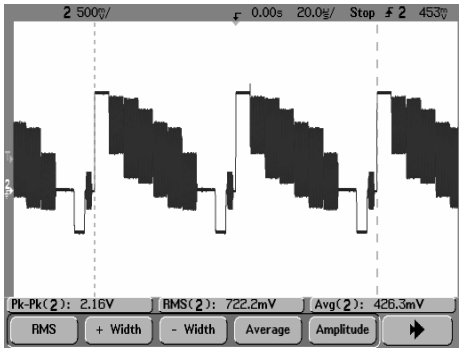
10-2 Signal waveform in the image board

• VIDEO

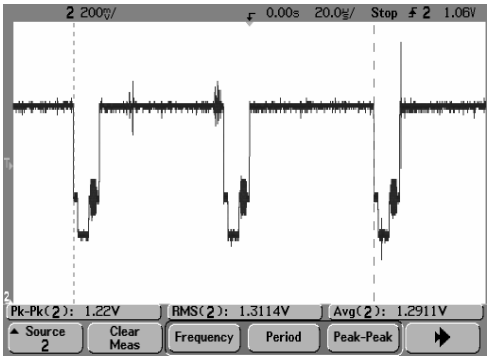
Video: Timing946 Pattern946 Color bar picture （Y/C separate）In pin88、Q602 E rank



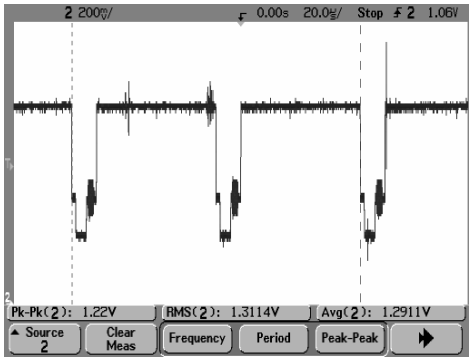
Video: Timing946 Pattern946 Color bar picture U602 U602 （Y/C separate）Out pin84U611 In pin73



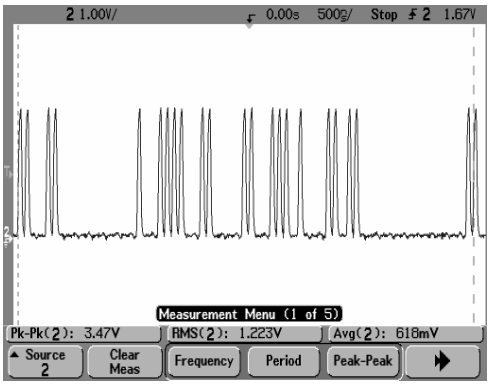
Video: Timing 949 Pattern936 Full White Picture U602 （Y/C separate）In pin88、Q602 E rank



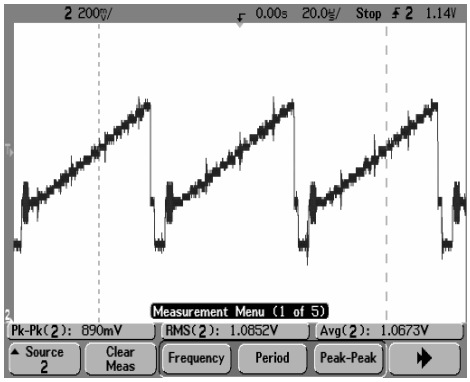
Video: Timing 949 Pattern936 Full White Picture U602 （Y/C separate）Out pin84U611 In pin73



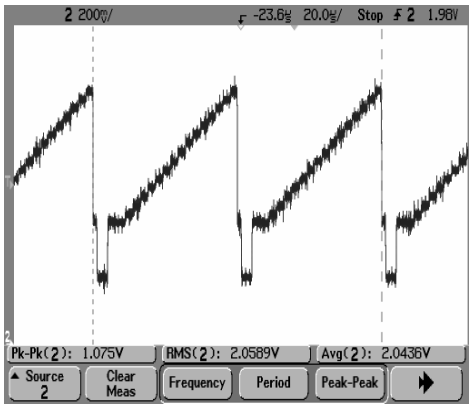
Video: Timing 949 Pattern936 Full White Picture Decoder output 8bit digital signal



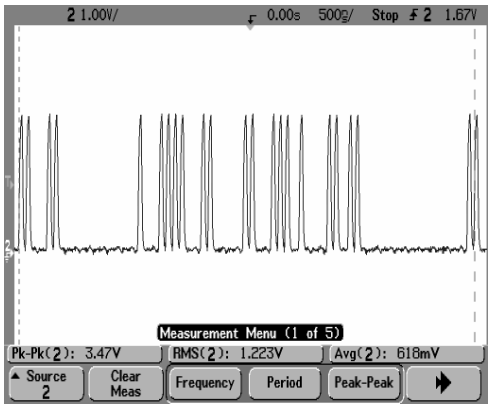
Video: Timing 949 Pattern921 Gray Picture U602 （Y/C separate）In pin88、Q602 E极



Video:Timing 949 Pattern921 Gray Picture
U602 (Y/C separate) Outpin84 U611 In pin73

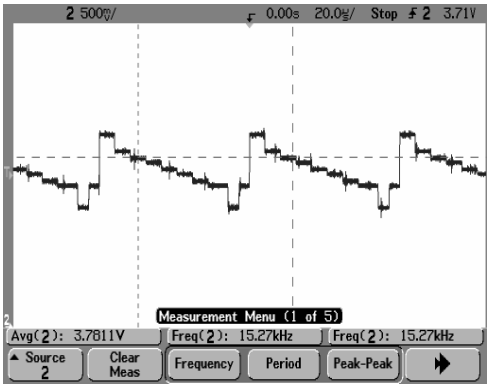


Video:Timing 949 Pattern921 Gray Picture
U611 Decoder output 8bit digital signal

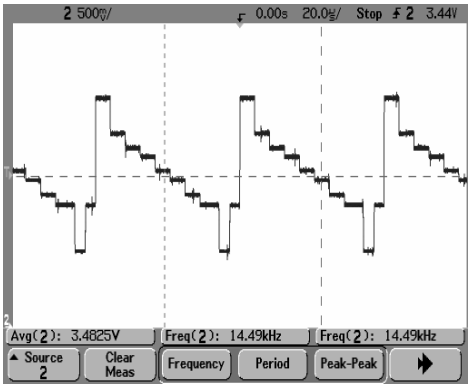


• S—VIDEO

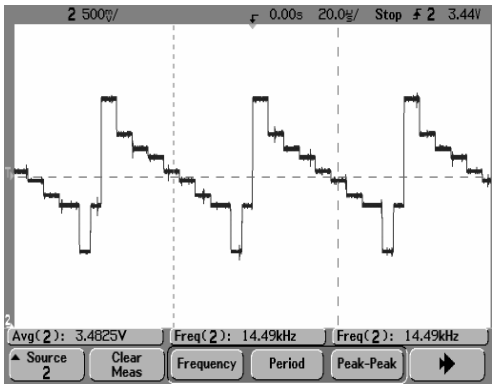
S-Video:Timing 946 Pattern946 Color bar picture
U600 pin5 Q600 E rank



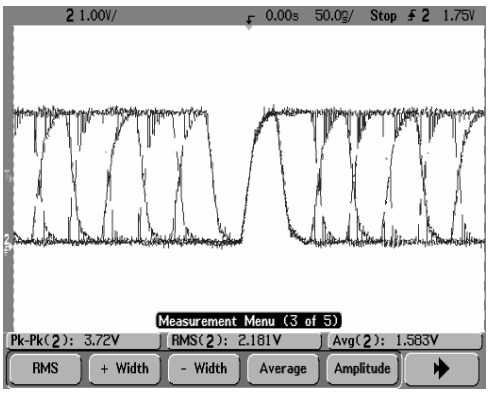
S-Video:Timing 946 Pattern946 Color bar picture
U600 PIN18 U602 pin88



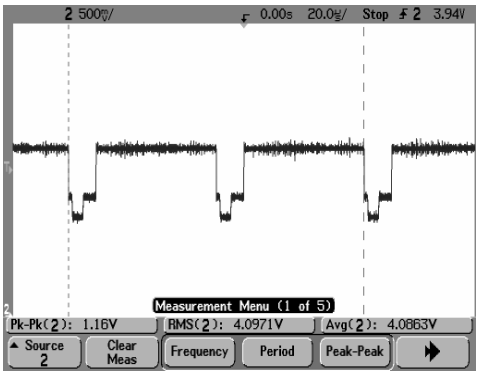
S-Video:Timing 946 Pattern946 Color bar picture
U602 pin84 U611 pin73



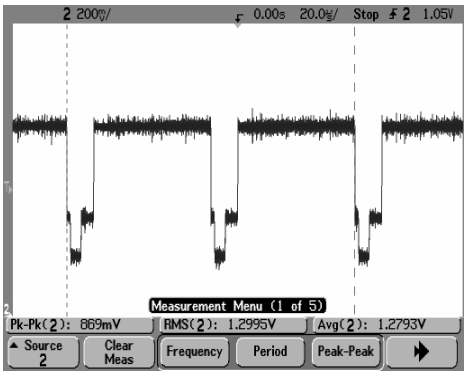
S-Video:Timing 949 Pattern946 Color bar picture
U611 output 8bit digital signal



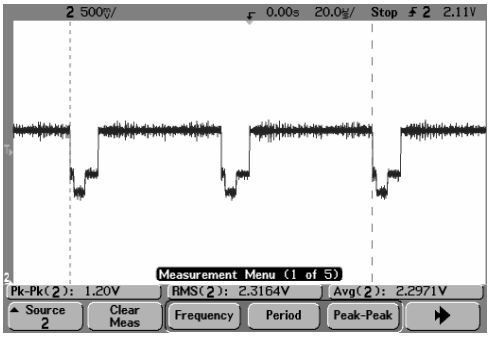
S-Video:Timing 949 Pattern936 Full White Picture
U600 pin5 Q600 E rank



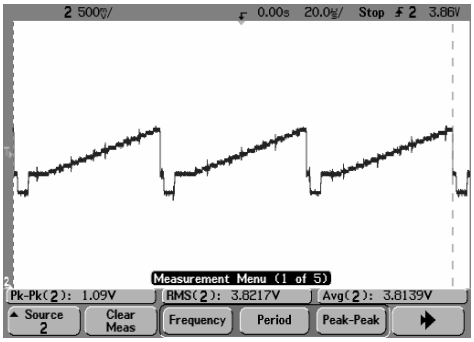
S-Video:Timing 949 Pattern936 Full White Picture
U600 pin18 U602 pin88



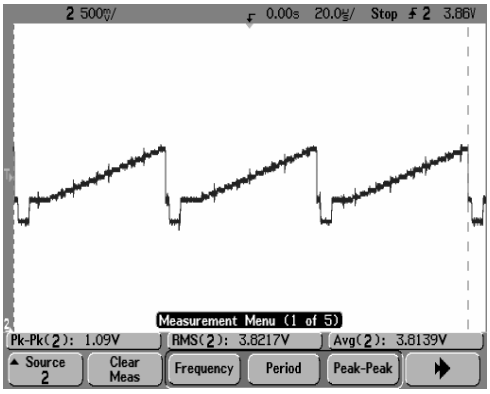
S-Video:Timing 949 Pattern936 Full White Picture
U602 pin84 U611 pin73



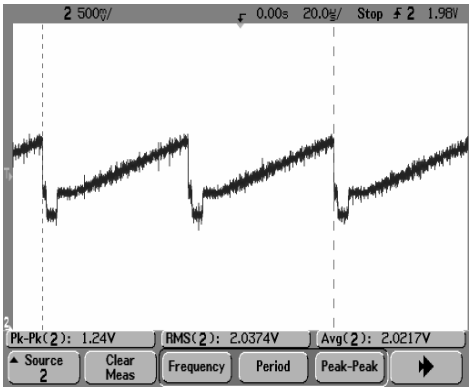
S-Video:Timing 949 Pattern921 Gray Picture
U600 pin5 Q600 E rank



S-Video:Timing 949 Pattern921 Gray Picture
U600 pin18 U602 pin88

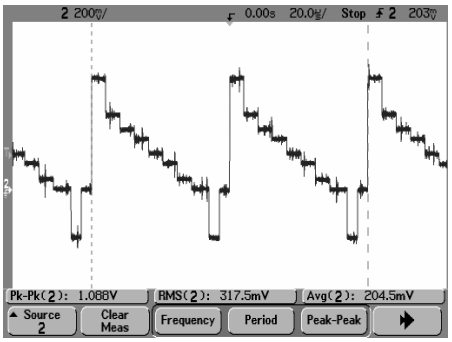


S-Video:Timing 949 Pattern921 Gray Picture
U602 pin84 U611pin73

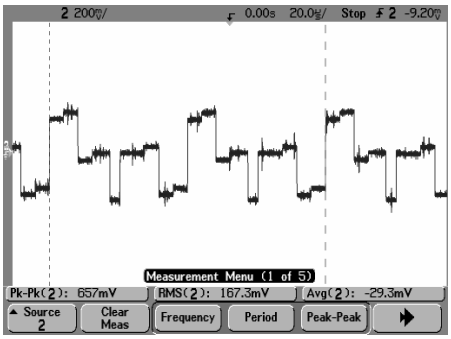


YCBCR

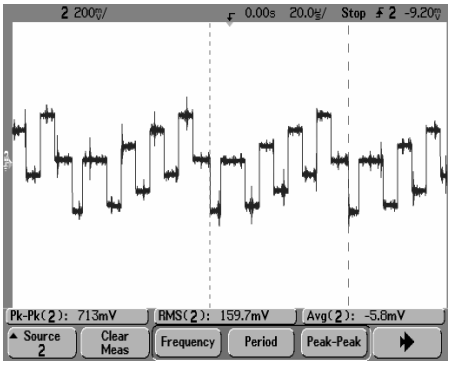
YCbCr:Timing946 Pattern946 Color bar picture
Y Signal --L618



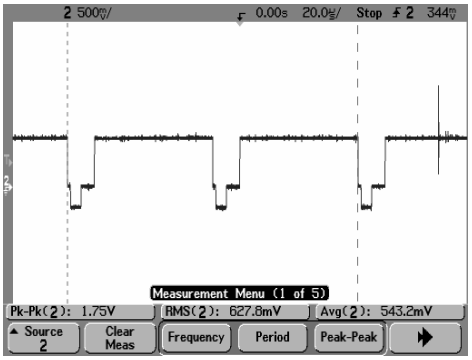
YCbCr:Timing 946 Pattern946 Color bar picture
R Signal—L619



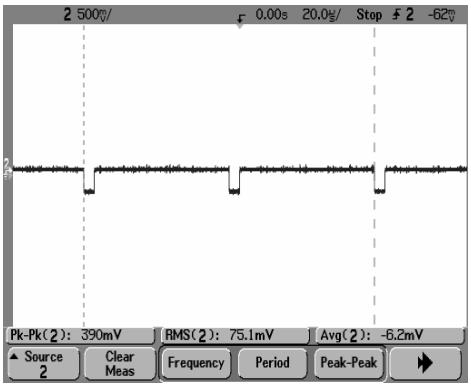
YCbCr:Timing 946 Pattern946 Color bar picture
B Signal—L617



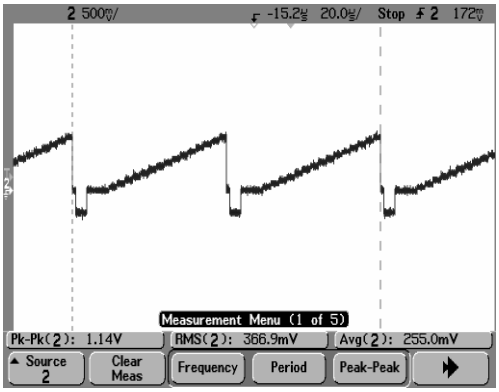
YCbCr:Timing 949 Pattern936 Full White Picture
Y Signal—L618



YCbCr:Timing 949 Pattern936 Full White Picture
R/B Signal—L619/L617

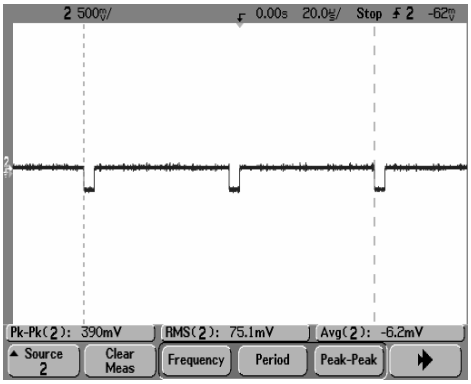


YCbCr:Timing 949 Pattern921 Gray Picture
Y Signal—L618



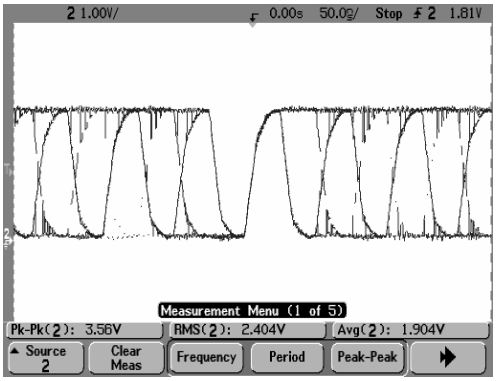
YCbCr:Timing 949 Pattern921 Gray Picture

R/B—L619/L617 Signal



YCbCr:Timing 949、946 Pattern921、936、94 Gray Picture/ Color bar picture/ Full White Picture

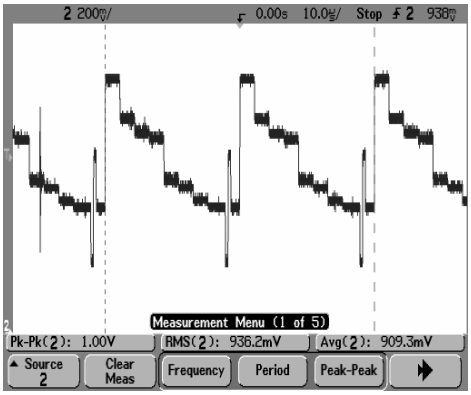
Decoder output 8bit digital signal



YPBPR

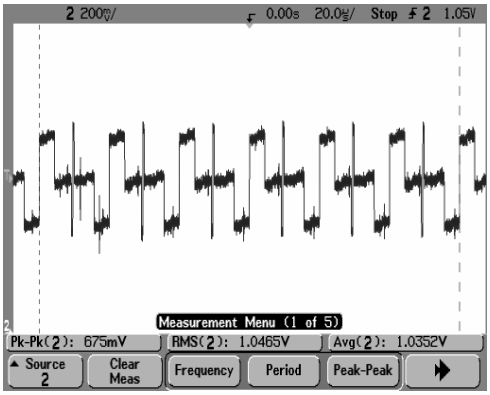
YPbPr:Timing 955 PATTERN946 Color bar picture

Y Signal—L611



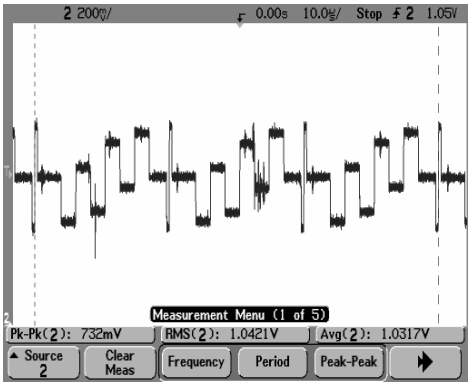
YPbPr:Timing 955 Pattern946 Color bar picture

R Signal—L612



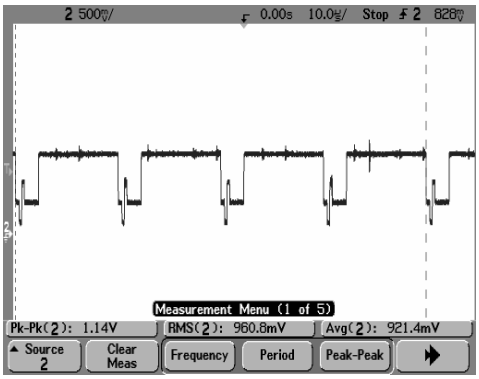
YPbPr:Timing 955 Pattern946 Color bar picture

B Signal—L610

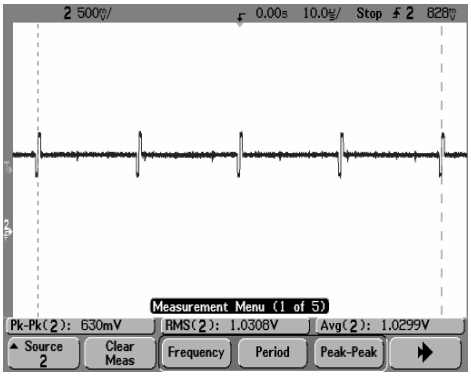


YPbPr:Timing 954 Pattern936 Full White Picture

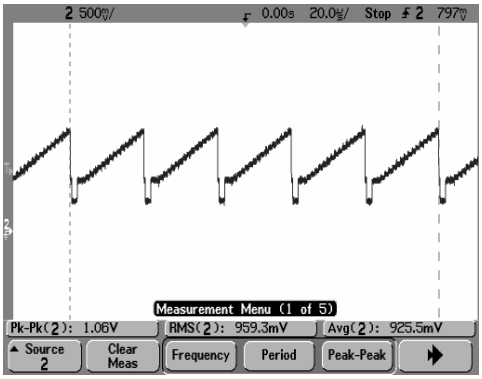
Y Signal—L611



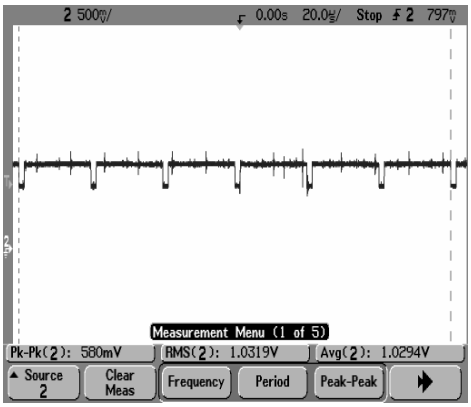
YPbPr:Timing 954 Pattern936 Full White Picture
R/B Signal—L612/L610



YPbPr:Timing 953 Pattern921 Gray Picture
Y Signal—L611

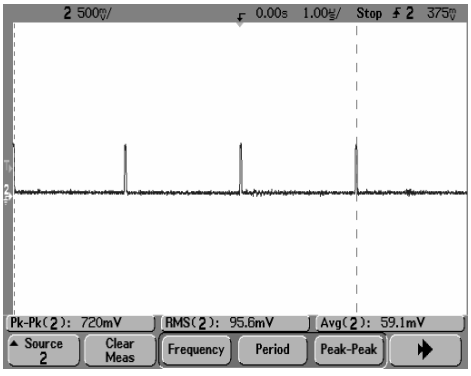


YPbPr:Timing 953 Pattern921 Gray Picture
R/B Signal—L612/L610

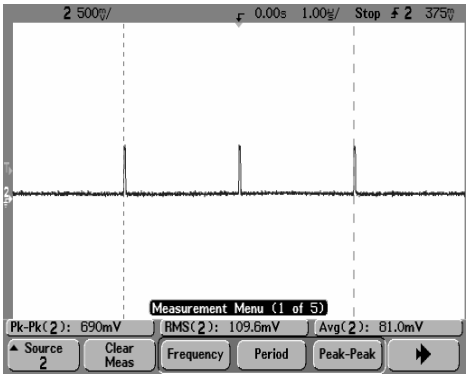


R/G/B

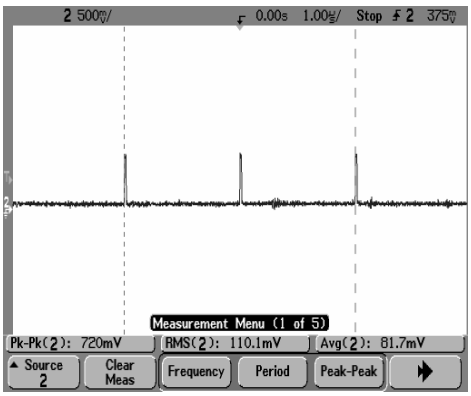
RGB:Timing4 Pattern101 Pane Picture
R—FL700 Waveform



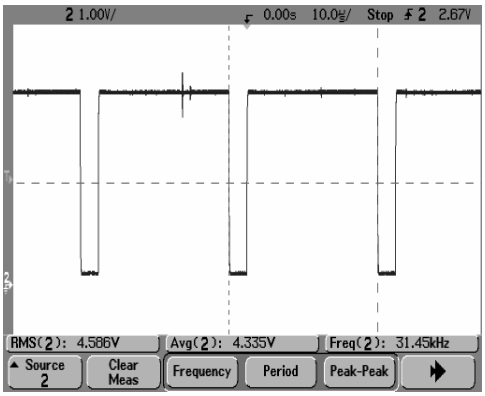
RGB:Timing4 Pattern101 Pane Picture
G—FL701 Waveform



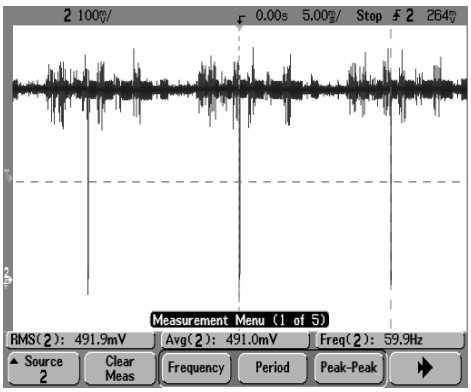
RGB:Timing4 Pattern101 Pane Picture
B—FL702 Waveform



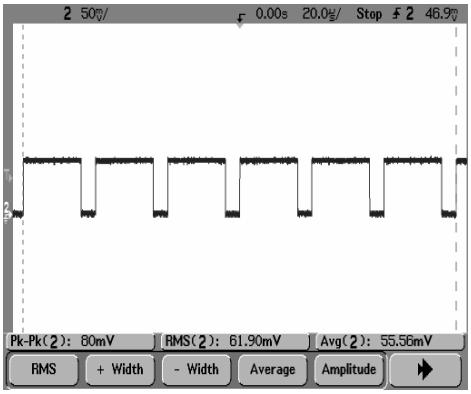
RGB:Timing4 Pattern101 Pane Picture
H—FL704 Waveform



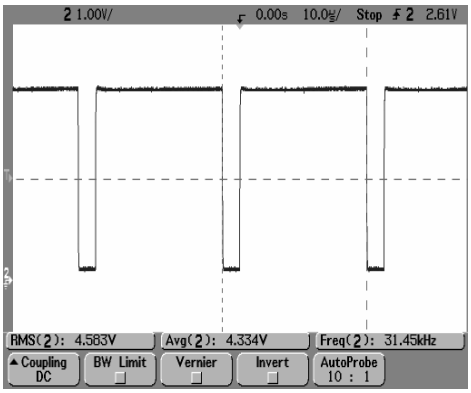
RGB:Timing4 Pattern101 Pane Picture
V—FL705 Waveform



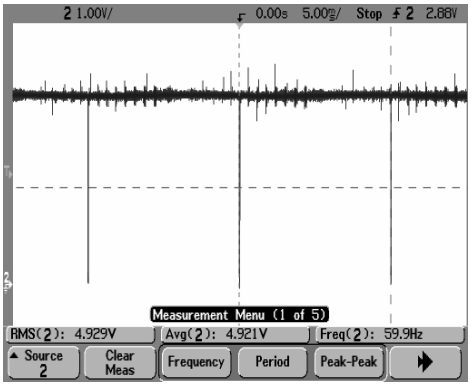
RGB::Timing4 Pattern105 Full White Picture
RGB—FL700/701/702 Waveform



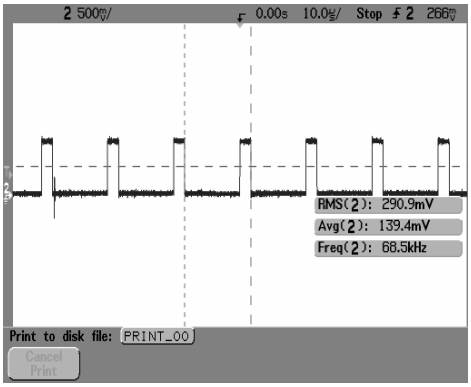
RGB:Timing4 Pattern105 Full White Picture
H—FL704 Waveform



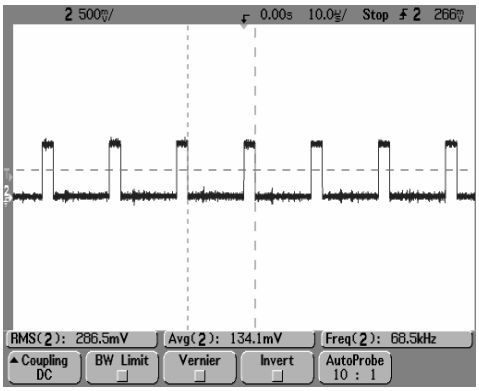
RGB:Timing4 Pattern105 Full White Picture
V—FL705 Waveform



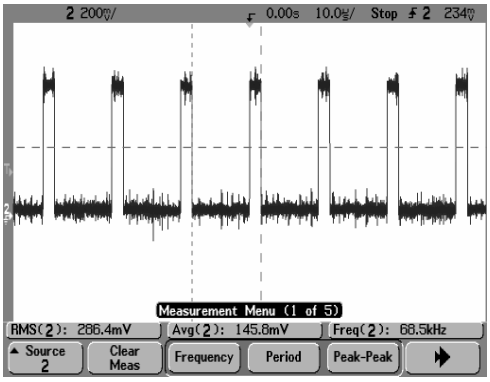
RGB:Timing172 Pattern105 Window Picture
R—FL700 Waveform



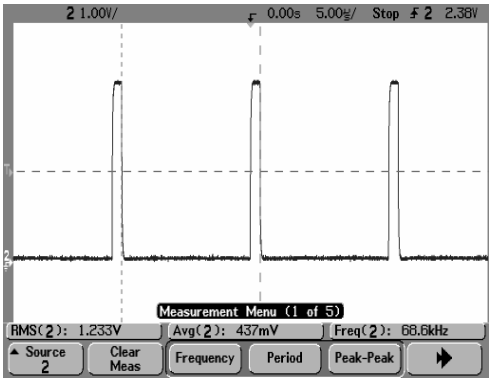
RGB:Timing172 Pattern105 Window Picture
G—FL701 Waveform



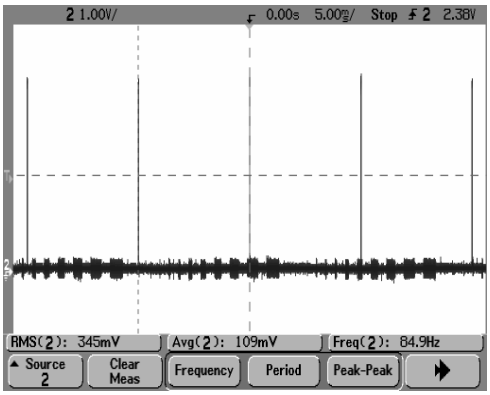
RGB:Timing172 Pattern105 Window Picture
B—FL702 Waveform



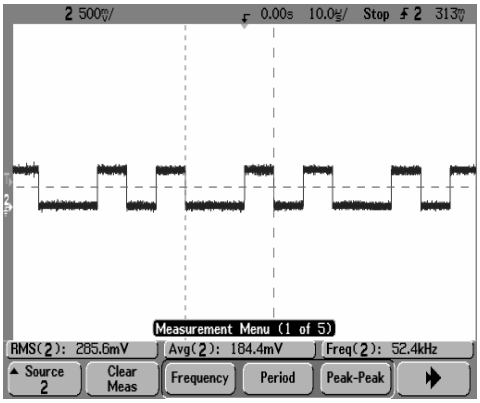
RGB:Timing172 Pattern105 Window Picture
H—FL704 Waveform



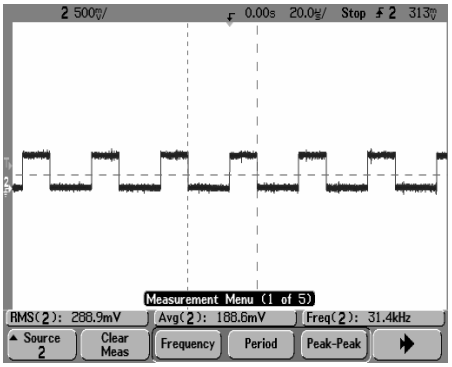
RGB:Timing172 Pattern105 Window Picture
V—FL705 Waveform



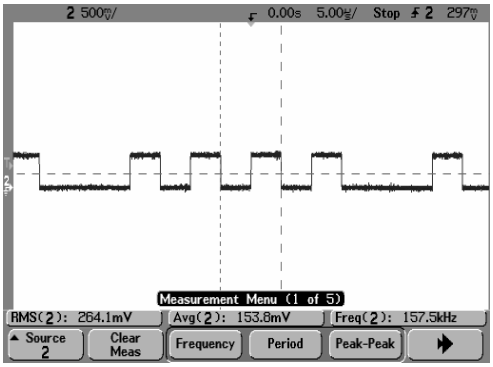
RGB:Timing4 Pattern27 Color bar picture
R—FL700 Waveform



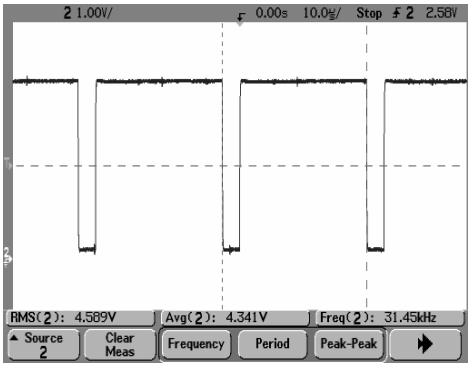
RGB:Timing4 Pattern27 Color bar picture
G—FL701 Waveform



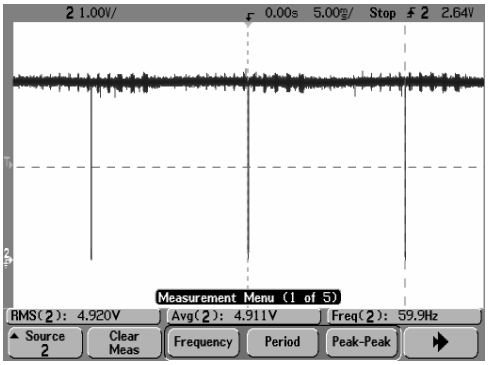
RGB:Timing4 Pattern27 Color bar picture
B—FL702 Waveform



RGB:Timing4 Pattern27 Color bar picture
H—FL704 Waveform



RGB:Timing4 Pattern27 Color bar picture
V—FL705 Waveform

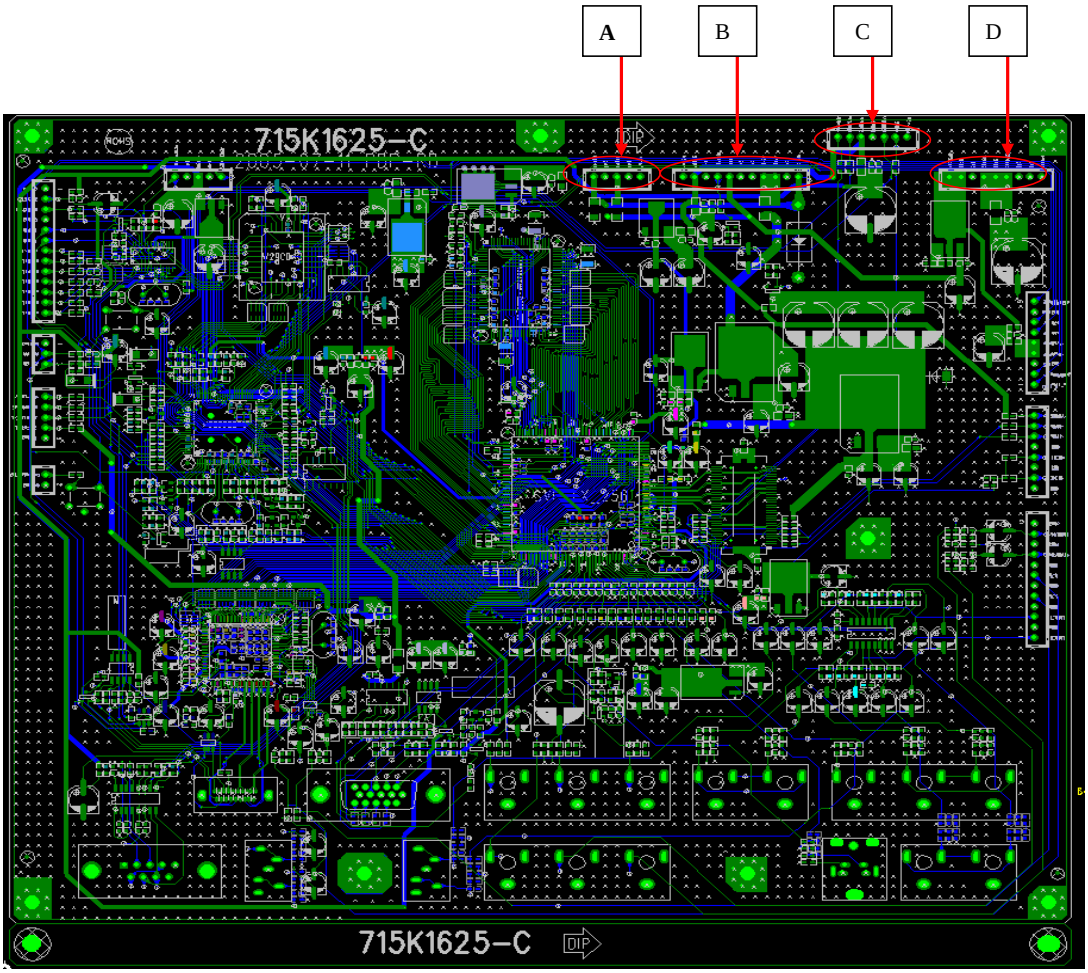


11、Check and Measure

11-1 Image board

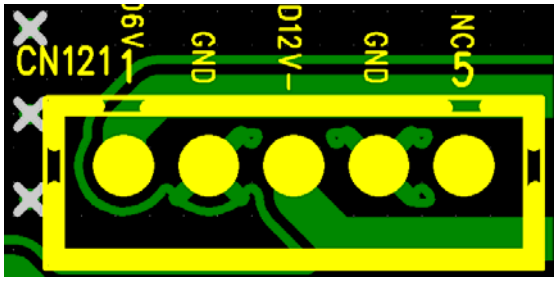
Test the power of each chip with the universal meter, to ground impedance and earth situation.

11-1-1 Power Check and Measure



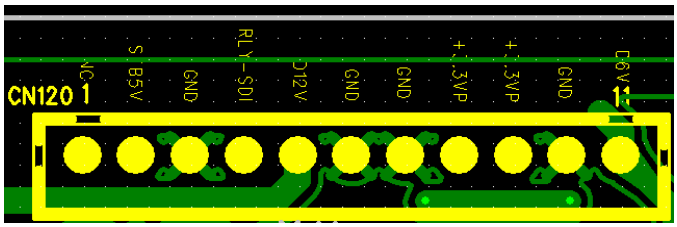
Supply with getting red arrow point A/B/C/D that identification come out for power, image of board with the interface among having picture, it corresponding power make detection method separately among following several picture.

①. In the following tht picture it is successively 1pin to 5 pin of CN121 from left to right, Among them, 1pin connect 6V voltage and 3pin connect 12V;2pin and 4pin connect power,5pin no connect.



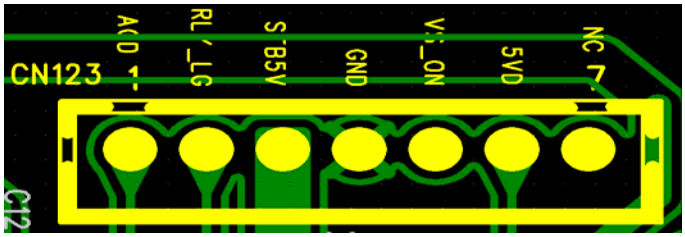
NOTICE：This Picture For SDI Panel Power

②. In the following picture it is suc cessively 1 to 11 pin of CN120 from left to right. Among them, The second pin connects STB5V and supplied the power of CPU U38,this voltage is direct provide Panel Powre Board when turn on the PDP,And this is first reason for CPU normally working,4pin is Relay on signal output,5pin connect D12V,8pin and 9pin connect 3.3V power,11pin connect D6V Power,1pin no connect,3pin/6pin/7pin connect GND.



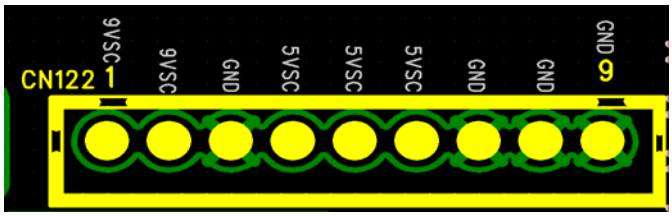
NOTICE：This Picture For SDI Panel Power

③. In the following picture it is successively 1 to 7 pin of CN123 from left to right,1pin ACD siganl output ,2pin Relay on signal output,3pin connect STB5V and this is provide power for CPU U38, this voltage is direct provide Panel Powre Board when turn on the PDP,And this is first reason for CPU normally working,4pin connect GND,5pin connect VS-ON signal output,6pin conncet 5V power,7pin no connect.



NOTICE：This Picture For LG Panel Power

④.In the following picture it is successively 1 to 7 pin of CN123 from left to right,1pin and 2pin connect 9VSC,3pin/7pin/8pin/9pin connect GND,4pin/5pin/6pin connect 5VSC power.



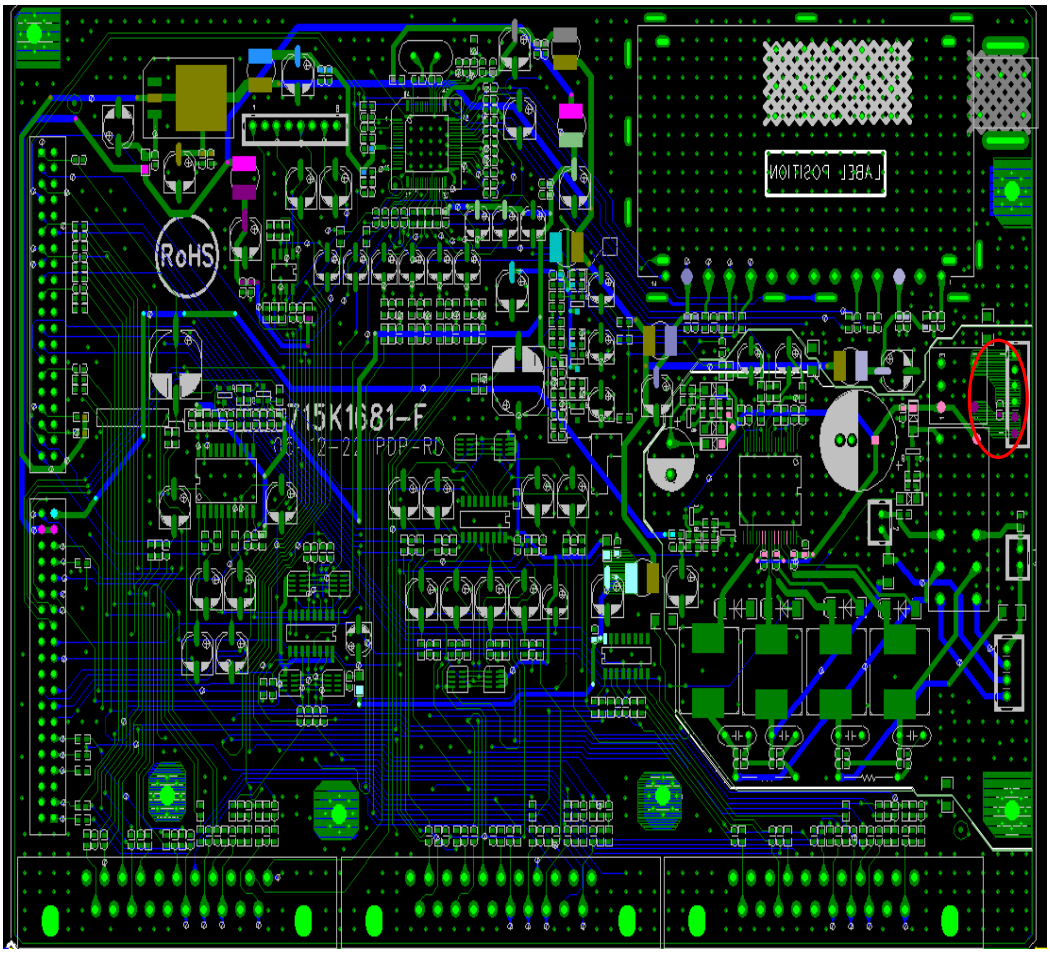
NOTICE：This Picture For LG Panel Power

11-1-2 Voltage value of IC necessary

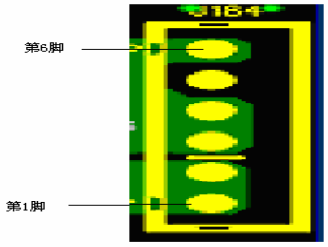
电压值	对应的 IC 的点位及其引脚
STB5V	U38(M30620SPGP)Pin(96,97) U101(AZ1117-33) Pin 3
+3.3VP	NC
D6V/5VSC	U701(AP1084D-ADJ) Pin 3 U702(AP1084K33) Pin 3 U703(AP1084D-ADJ) Pin 3 U704(AP1084K33) Pin 3 U708(AP1084K33) Pin 3 U201(MSP3450G) Pin63
9VSC	NC

D12V	U107(AZ1117) Pin 3 U605(TA2024) Pin24.25.29.30.33

11-2 AUDIO and TUNER Board CHECK

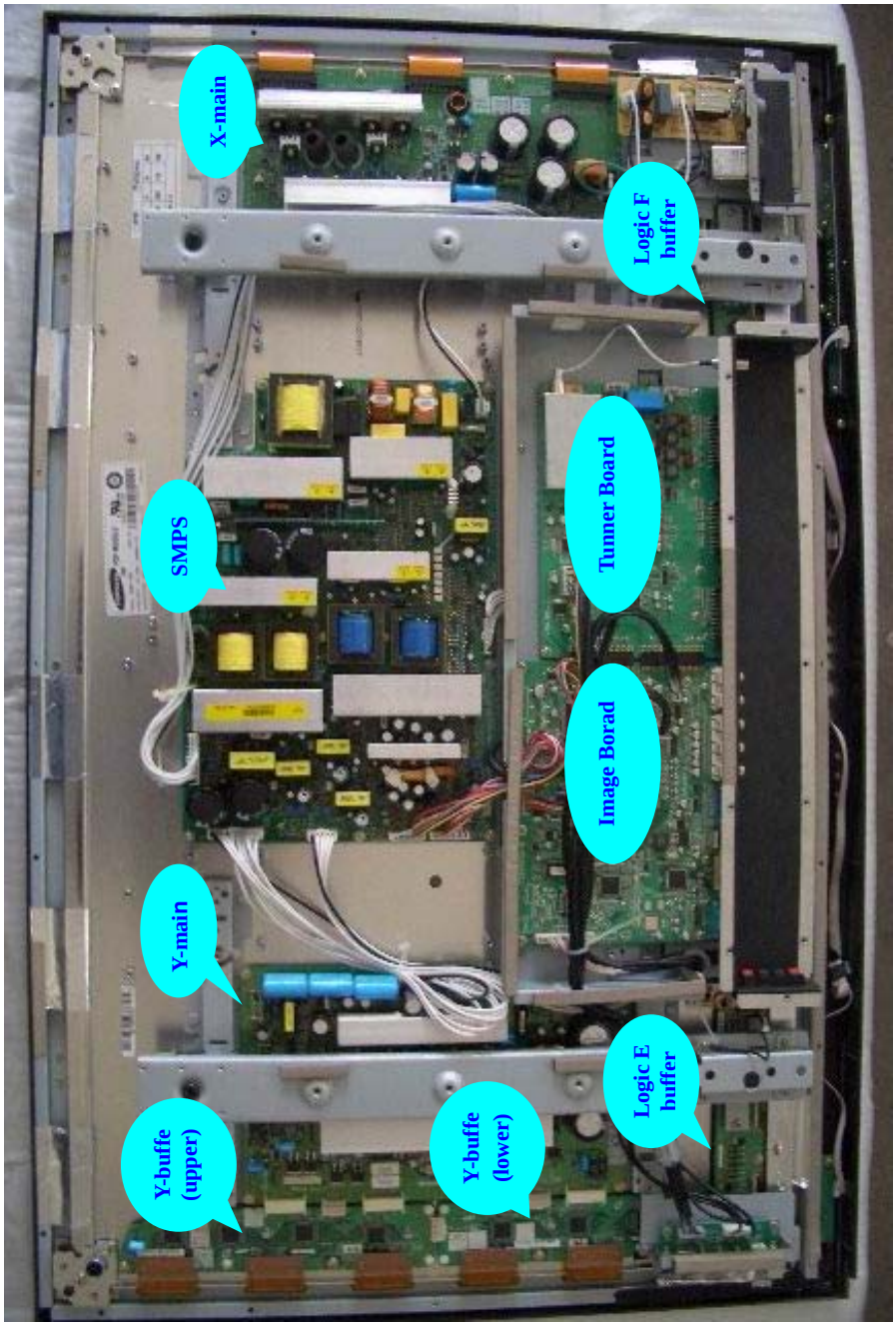


In the top picture it is provide Audio/Tuner Board Audio Amp power，Among them,1pin and 2pin connect 12V,3pin/4pin/6pin connect GND,5pin no connect.PLS consult nether oicture:



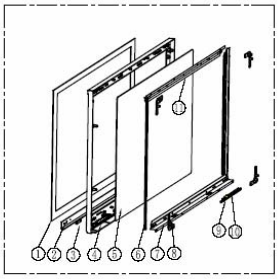
12、Mechanical Introduction

12-1 PDP Internal view

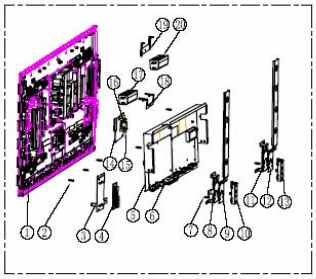


12-2 Mechanical of cabinet front disassembly

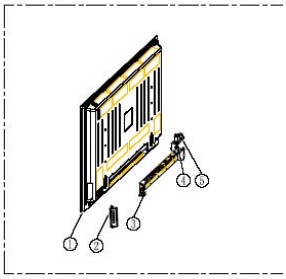
Front Cover Assembly



Chassis Assembly



Rear Cover Assembly



Front Cover Assembly

序号	料　　号	料　　号	数量
1	J33K9008　5 1A	FRONT-BK-FRAME	1
2	20K8015　3 1A	DECORATIVE AL BAR	1
3	33K8001　1	PC LENS	1
4	34K8004 QS 3F	FRONT MAIN FRAME	1
5	98K F42　3　5	OPTICAL FILTER	1
6	15K1050　6 1A	SHIELD METAL FRAME-V	2
7	15K1051　7 1B	SHIELDING METAL FRAME-H	1
8	15K1063　3 1B	PANEL BKT	4
9	33K4736 A6 3L	Key Button	1
10	KEPC4269C39	KEY BOARD	1
11	15K1051　6 1A	SHIELDING METAL FRAME-H	1

Chassis Assembly

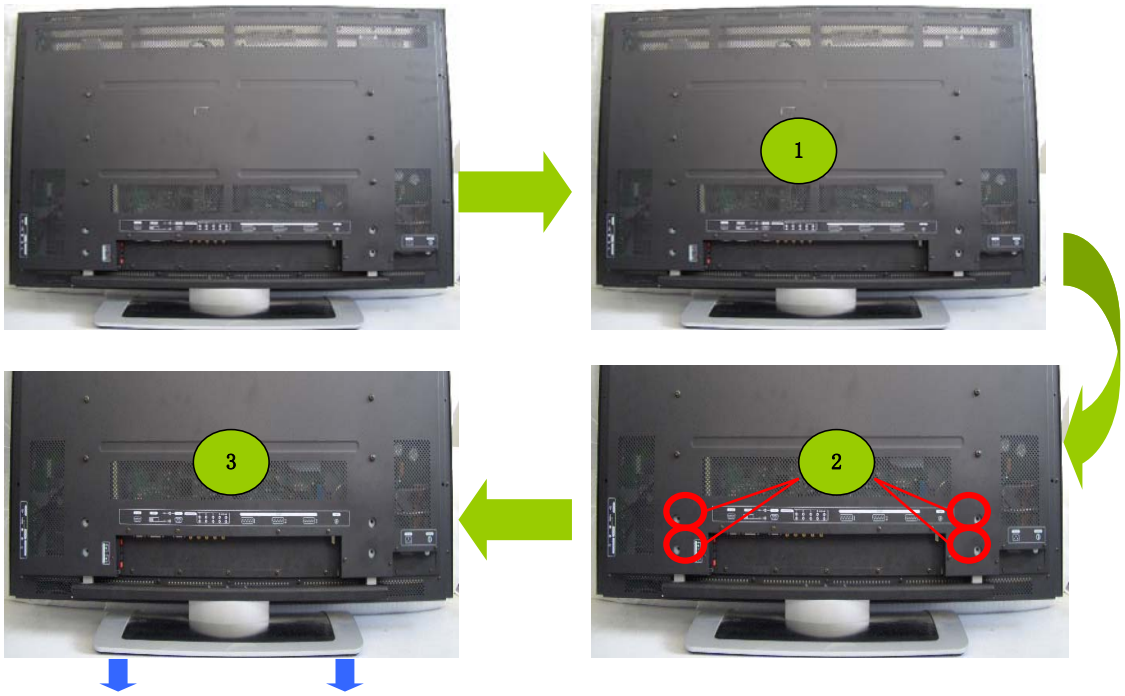
序号	料　　号	料　　号	数量
1	705KPS42 V4　2	PDP PANEL	1
2	2K 245　3 12	Stand off(12)	3
3	15K1067　7 1C	Side PCB BKT	1
4	TMPC4269C3P	Side BOARD	1
5	15K1056 18 1D	MAIN PCB BRACKET	1
6	MGPC4269D69	MAIN IMAGE BOARD	1
7	2K 245　4172	STAND OFF	2
8	15K1071 3L 2D	MAIN METAL FRAME-S	1
9	15K1053 2L 1B	Main Metal Frame-B	1
10	15K5994 ML	Stand Cover	1
11	15K1071 3R 2D	MAIN METAL FRAME-S	1
12	15K1053 2R 1B	Main METAL Frame-B	1
13	15K5994 MR	Stand Cover	1
14	15K1069 11 1B	P/S PCB BKT	1
15	33K4547 A5　L	P/S PCB BKT	1
16	PSPC4264PAP	POWER SWITCH BOARD	1
17	78K309 08 KL	INTERNAL SPEAKER	1
18	15K1065-11-1A	Speaker-Bracket	1
19	J15K1065-10-2A	Speaker-Bracket	1
20	78K309 08 KR	INTERNAL SPEAKER	1

Rear Cover Assembly

序号	料　　号	料　　号	数
1	15K1047 18 4A	REAR COVER	
2	15K1068　4 1C	SIDE COVER	
3	15K1048 18 2A	REAR LOW COVER	
4	73K174 8A LZ	EMI FILTER	
5	15K1064　2 2C	CONNECTER COVER	

12-3 Disassembly and assembly

12-3-1 PDP stand removal



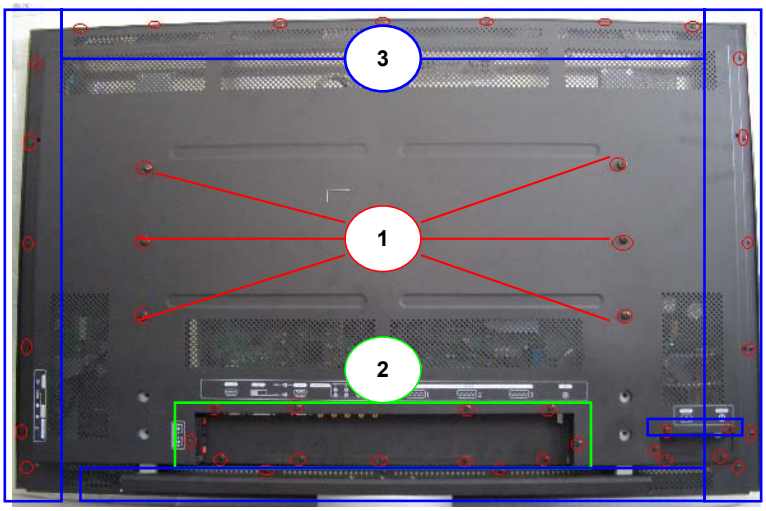
1) Unplug the AC power and all signal cables.

2) Place the PDP upside down on a tabletop (use a protection sheet or EPE bag), Take care, that this is flat and free from obstacles like screws, to prevent damaging the fragile PDP glass filter (1).

3) Remove the four black colored screws around the stand holder (2).

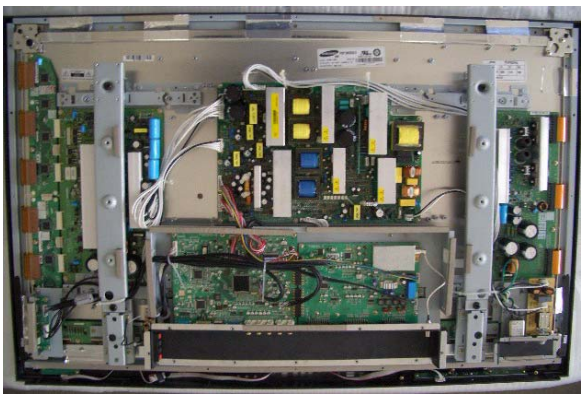
4) Remove the Base assembly from PDP as the direction arrowhead showed (3).

12-3-2 Back Cover Removal



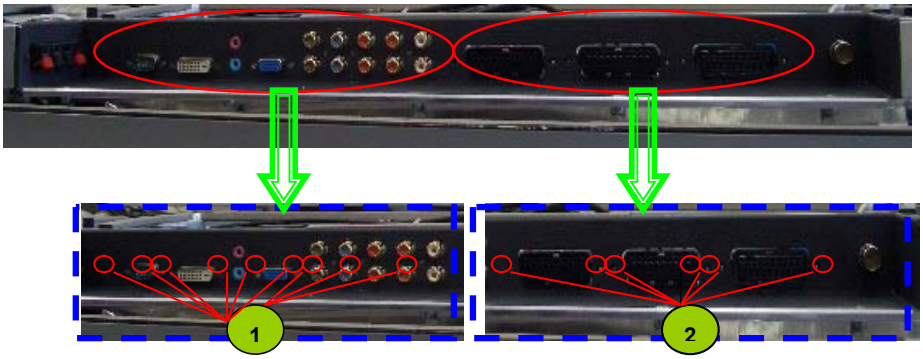
1). Remove the six big black colored screws in the panel holder as the red-circle showed (1).
2) .Remove the eleven black colored screws around the terminals as the green-pane showed (2).
3) .Remove the twerty-nine black colored screws around the back cover as the blue-pane showed (3).

4) .Carefully prize up the back cover from the left of the PDP (5).



5) .Carefully remove the Back Cover from the top of the PDP, and store in a safe place.

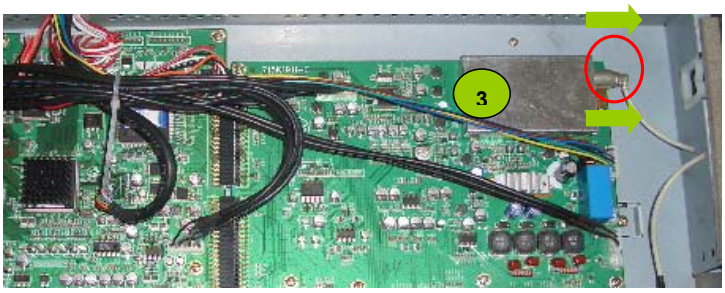
12-3-3 Rear Low Cover removal



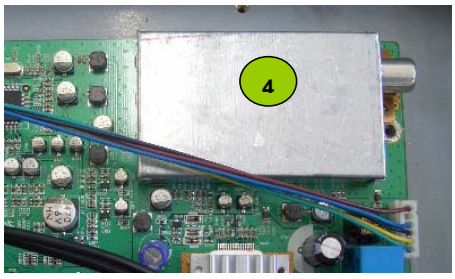
1). Carefully use a allen screwdriver to remove the six silver colored allen screws M3*6mm (1).

2) .Remove the five black screws(2).

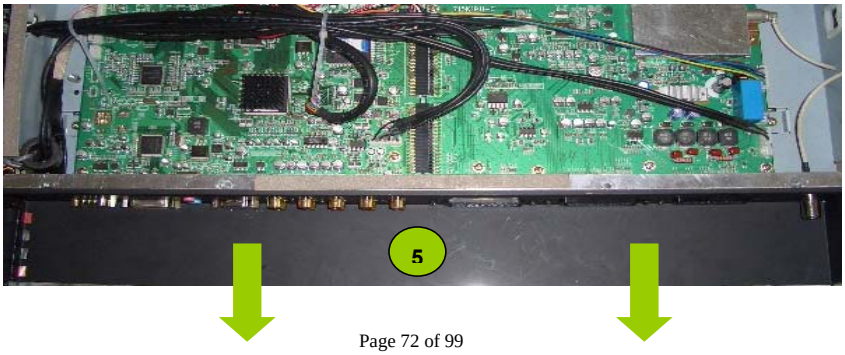
3).Remove the TUNER connect (3).



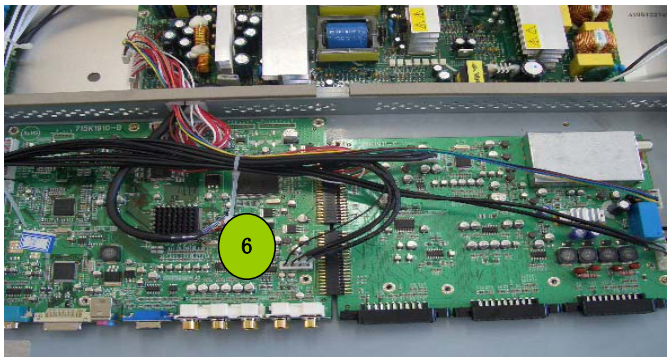
4).After remove the TUNER connect(4).



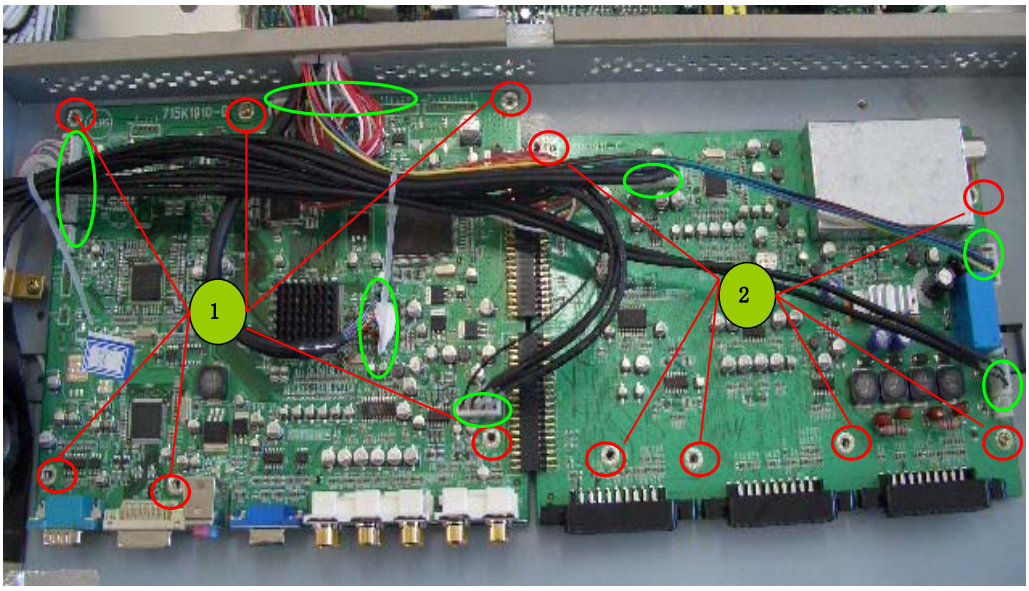
5).Remove the Rear Low Cover as the direction arrowhead showed (5).



6). The Rear Low Cover done(6)

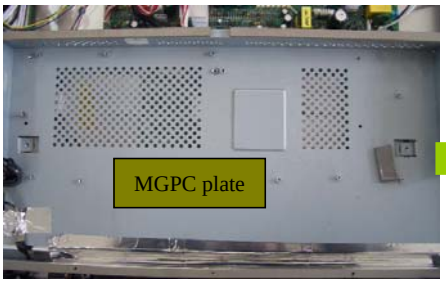


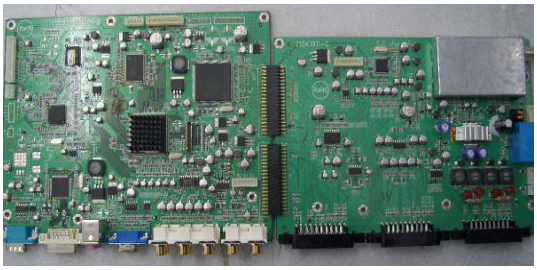
12-3-4 Main Board(MGPC) and TUNER AUDIO Board (TUPC)removal



1). Disconnect the all connectors(green circularity).

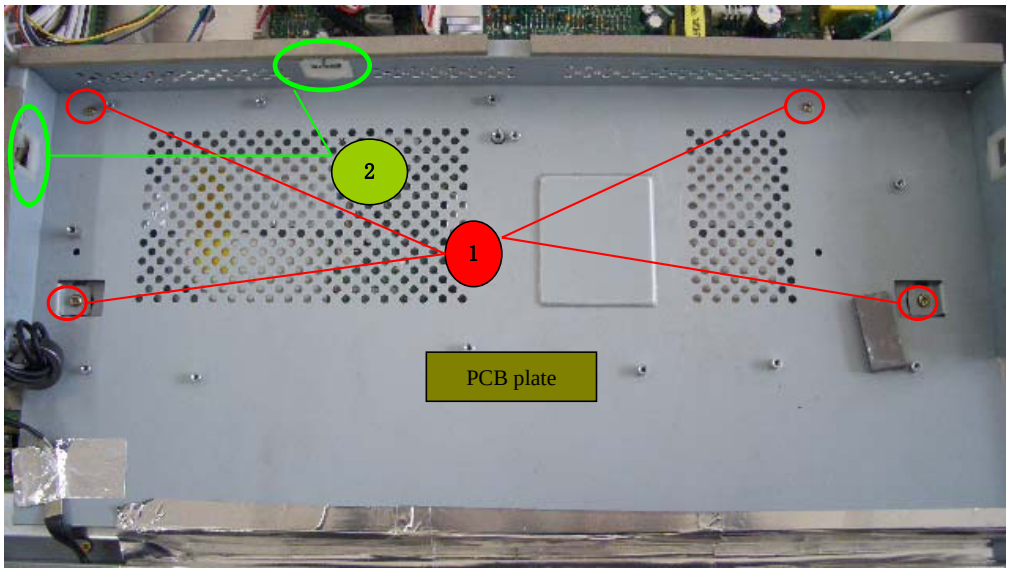
2) Remove the six silver screws from MGPC(main board)(1) and romove six silver from TUPC(2).





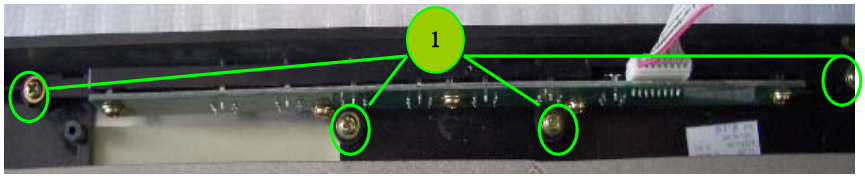
3) Remove the MGPC board from PCB plate. 4).Done

12-3-5 PCB Plate Removal

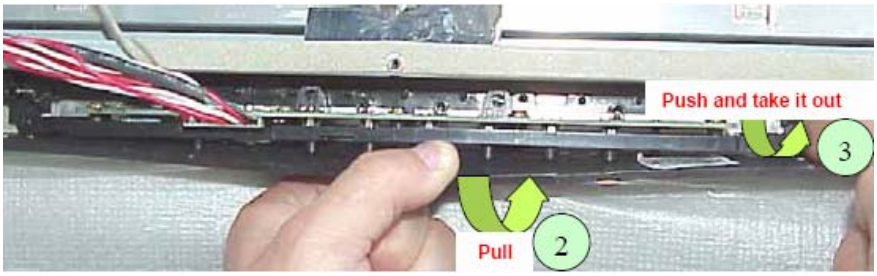


1). Remove the two Cable Clips from the PCB Plate(2)
2) .Remove the four sliver screws(1).
3). Remove the PCB Plate

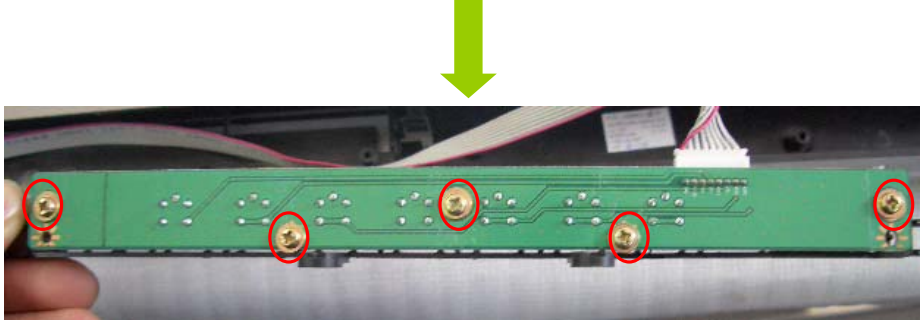
12-3-6 Key Board Remove



1) Remove the four silver screws(1).

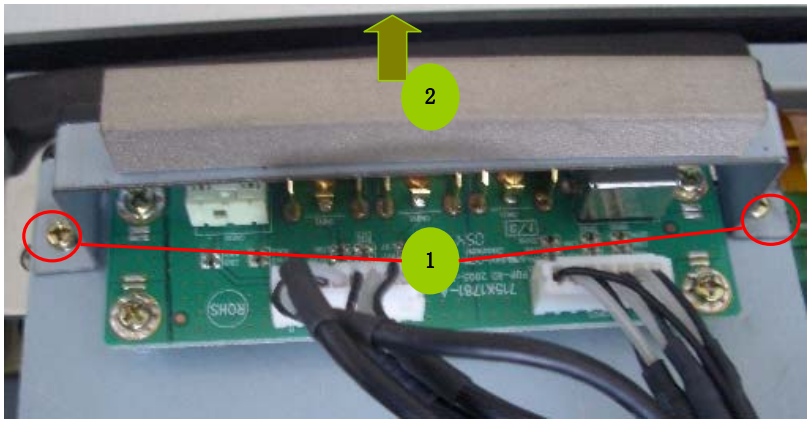


2). Pull the Bezel downside(2), then push and take out the KEY board assembly(3).



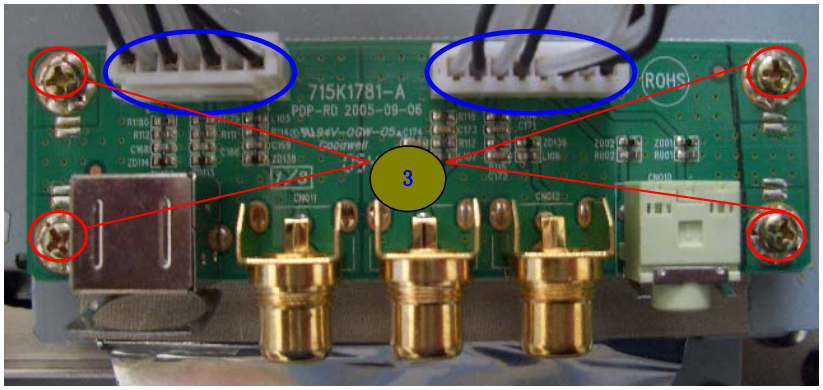
3). Remove the five silver screws to disassemble the key board from Key button.

12-3-7 Side AV Board Removal



1) .Remove the two silver screws (1).

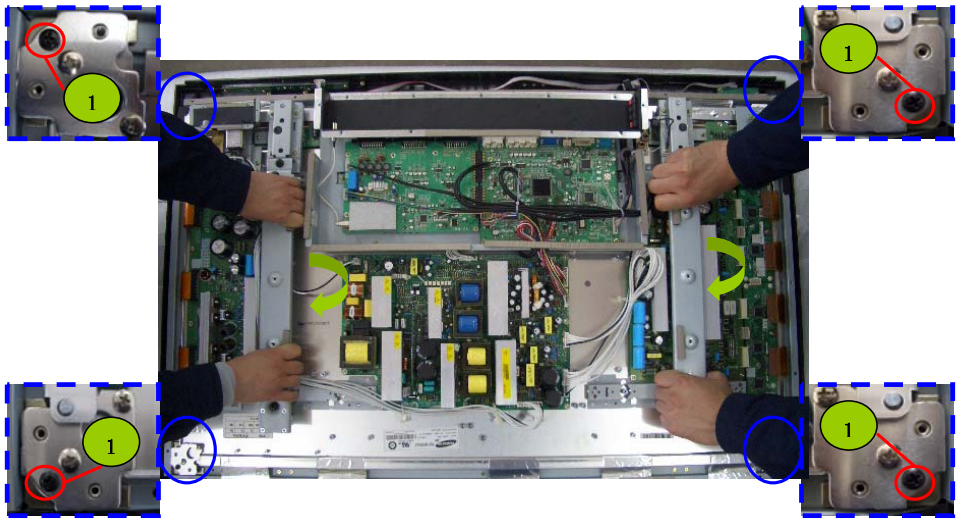
2). Remove the side cover from Side AV board(2)



3). Disconnect the blue circularity from Side AV board.

4). Remove the four silver screws (3).

12-3-8 Panel Module Removal

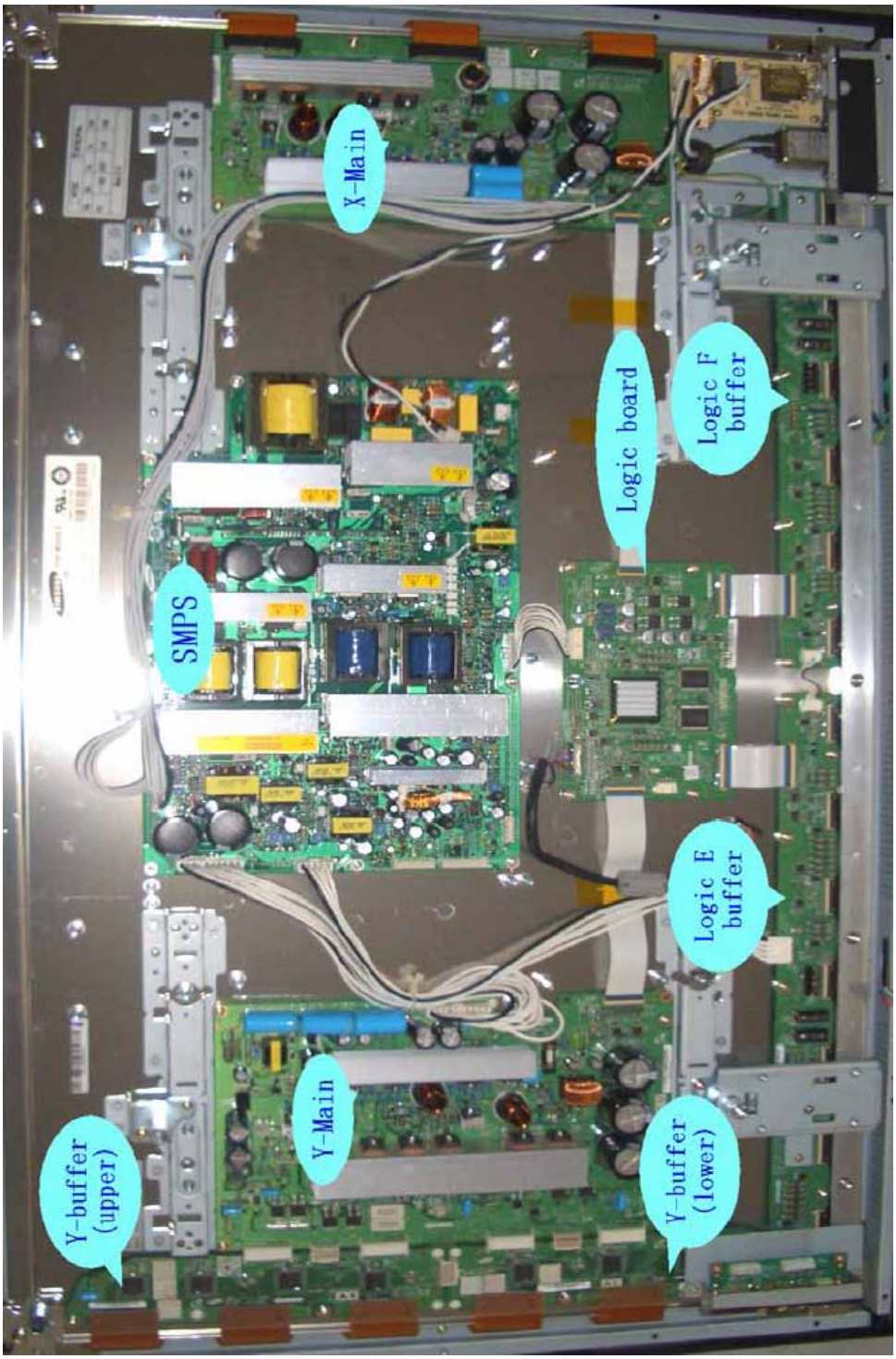


1) .Remove the four silver screw around the PANEL corner (1).

2).Remove all the aluminum foil around the panel (2), after assemble the new panel, must re-affix the aluminum foil, if it's broken must change a new one, otherwise, the EMI can be affected.

3). Two people hold the panel holder 1 and 2 respectively, then uplift the panel module and move it out form the front cover(Bezel), and store in a safe place.

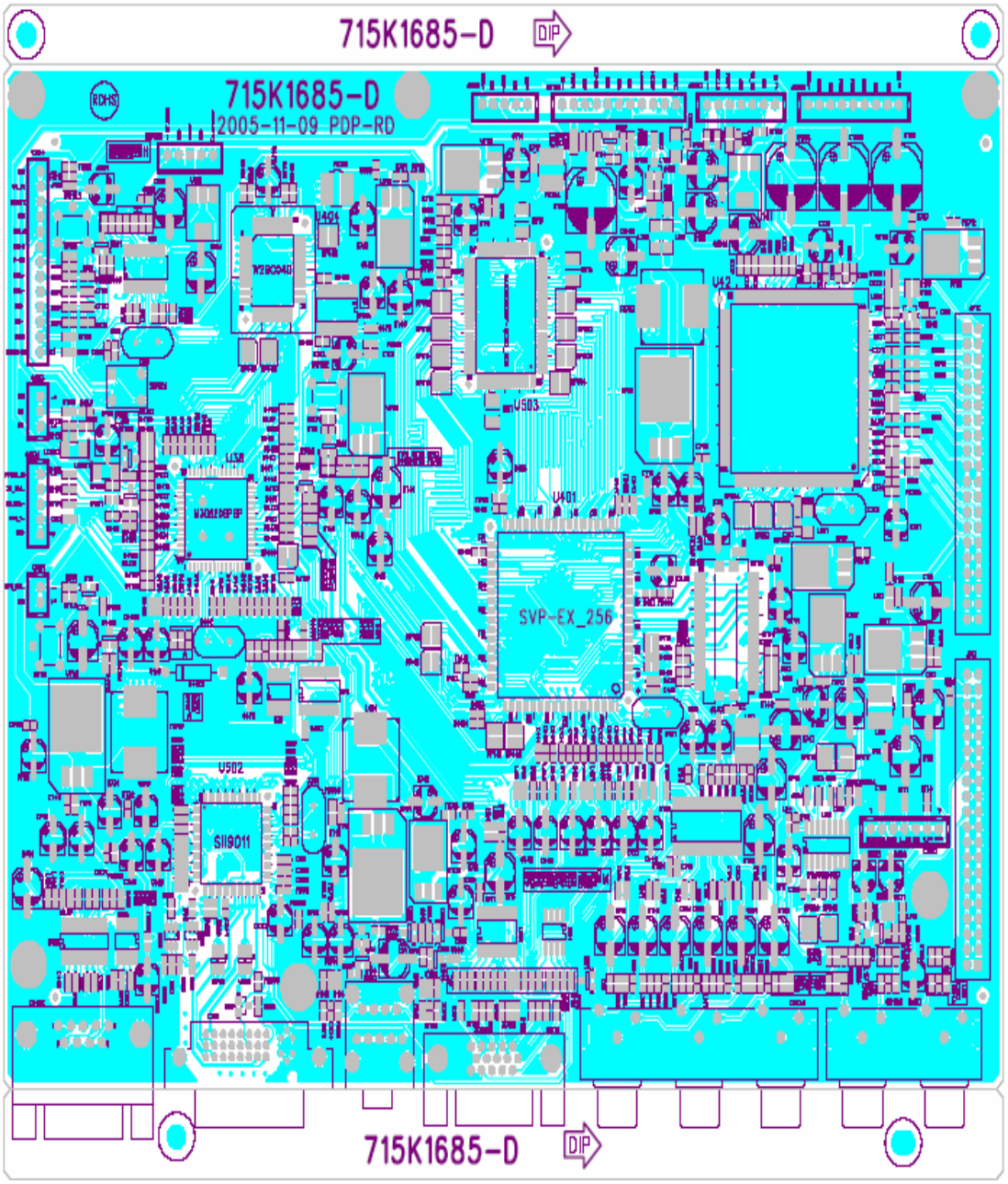
12-4 Panel Wiring diagram



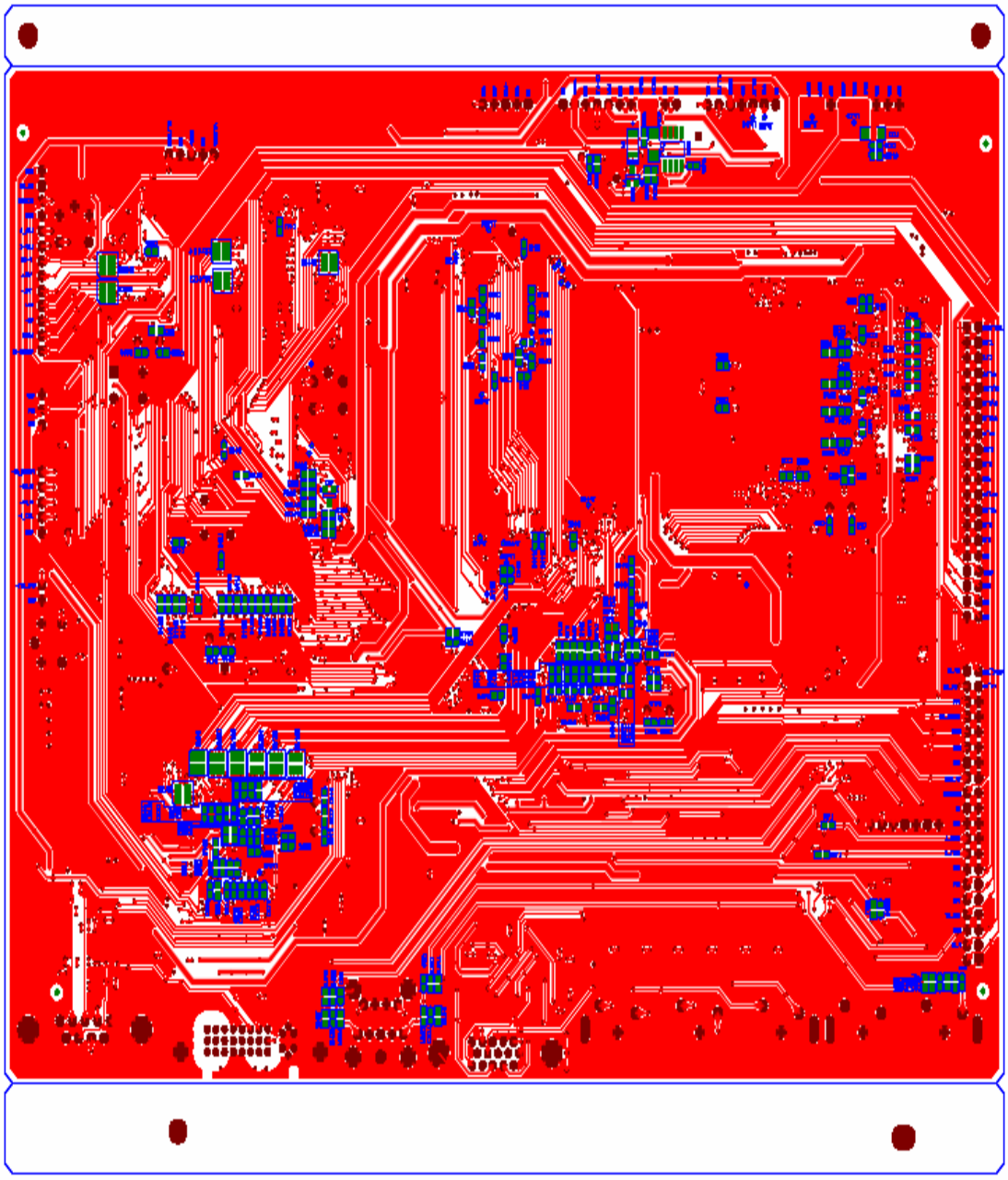
13、PCB LAYOUT

13-1 Image broad PCB LAYOUT

PASTE MASK TOP

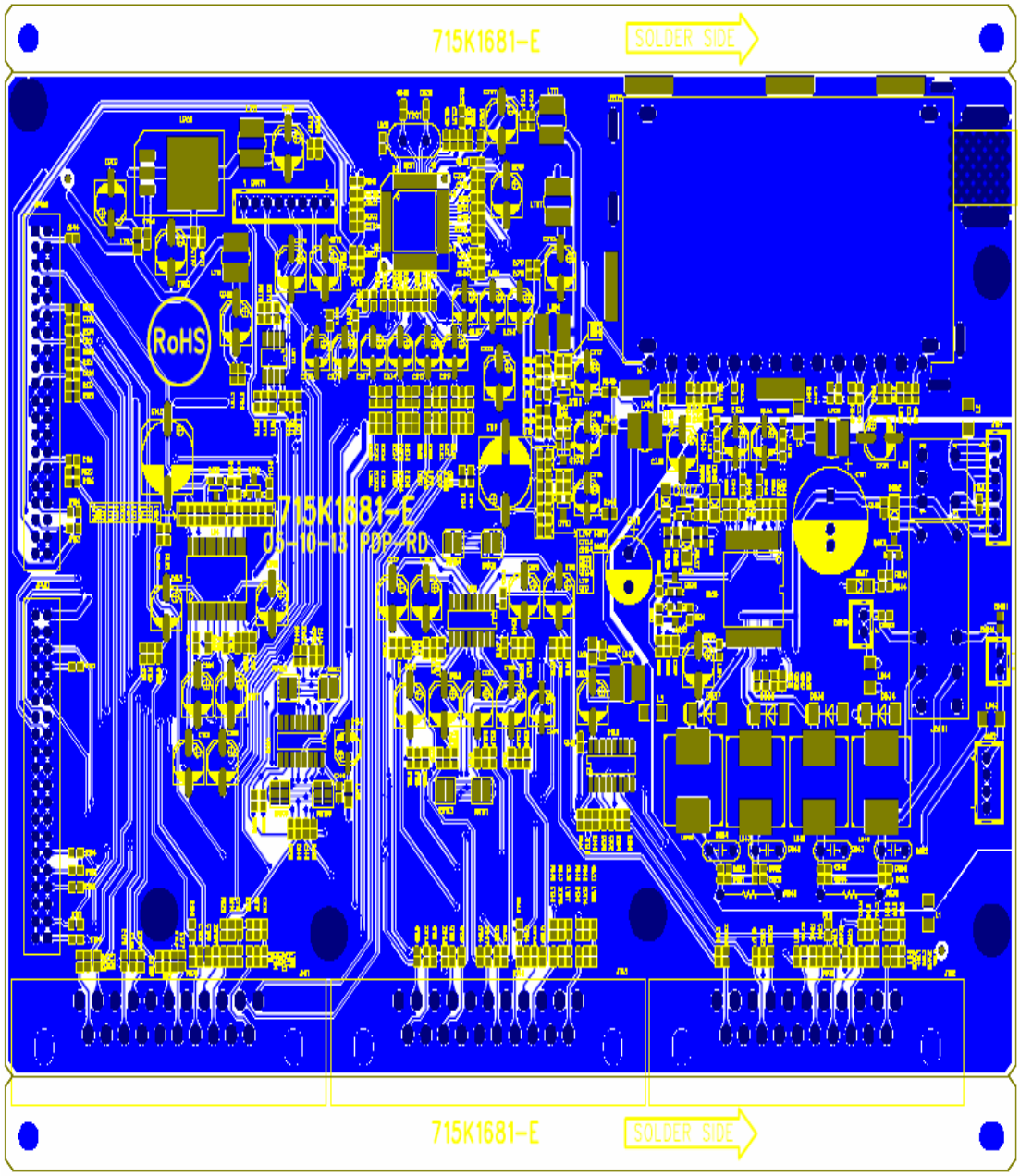


PASTE MASK BOTTOM

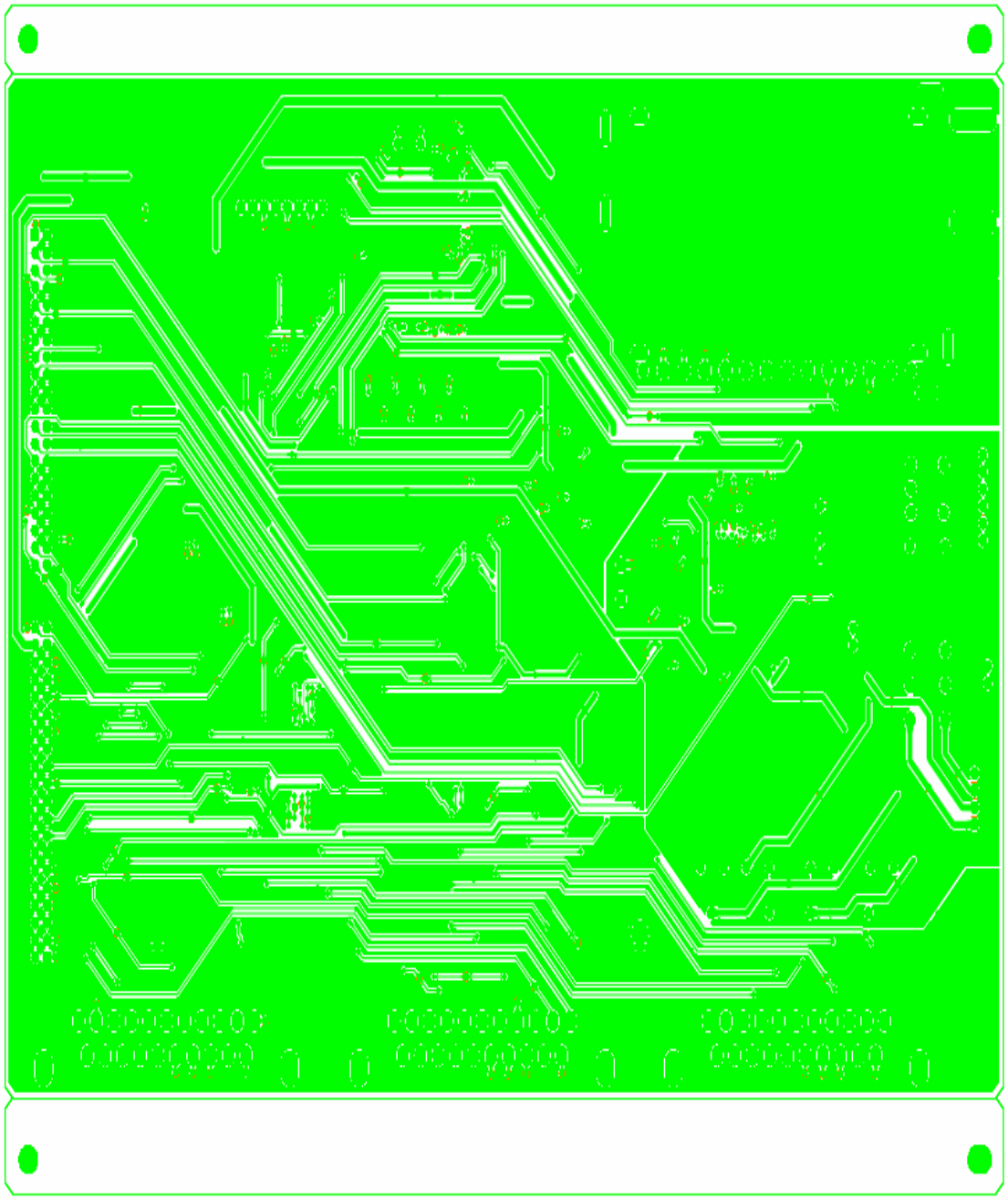


13-2 TUNER board and AUDIO board PCB LAYOUT

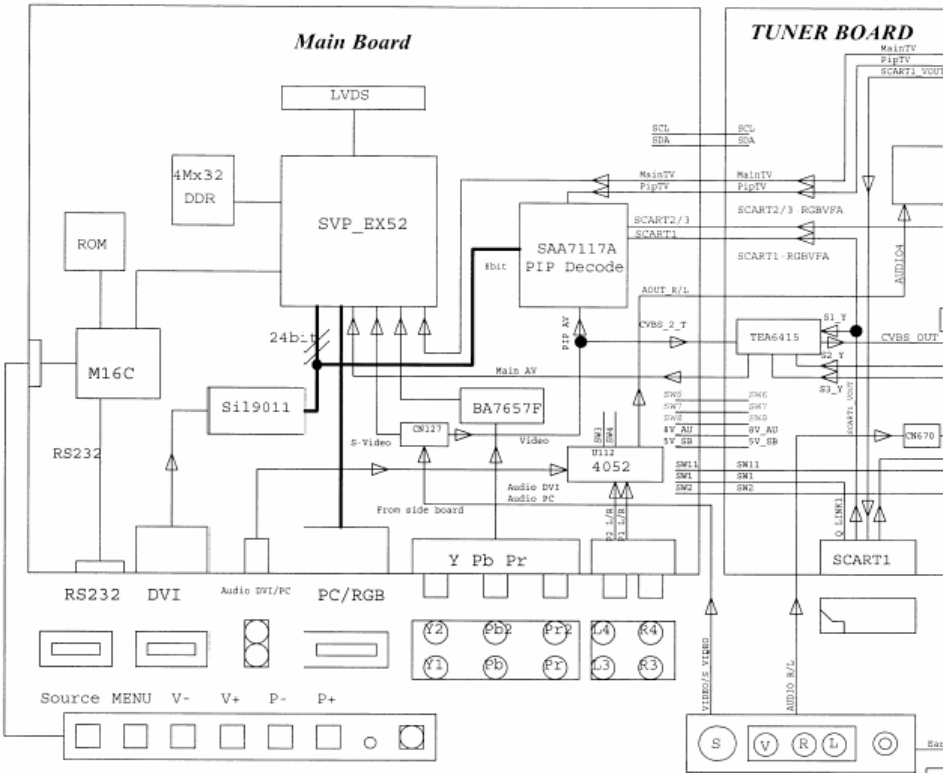
TOP

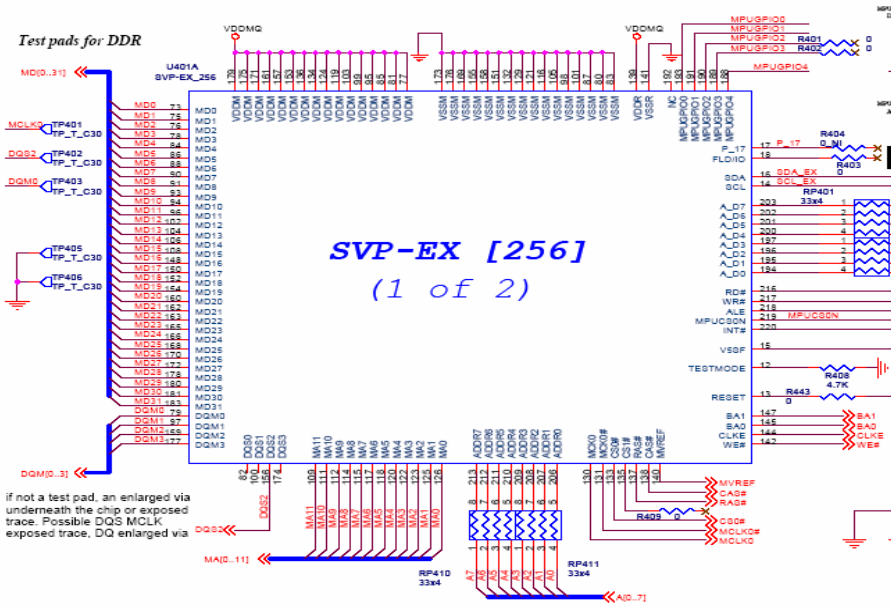


BOTTOM



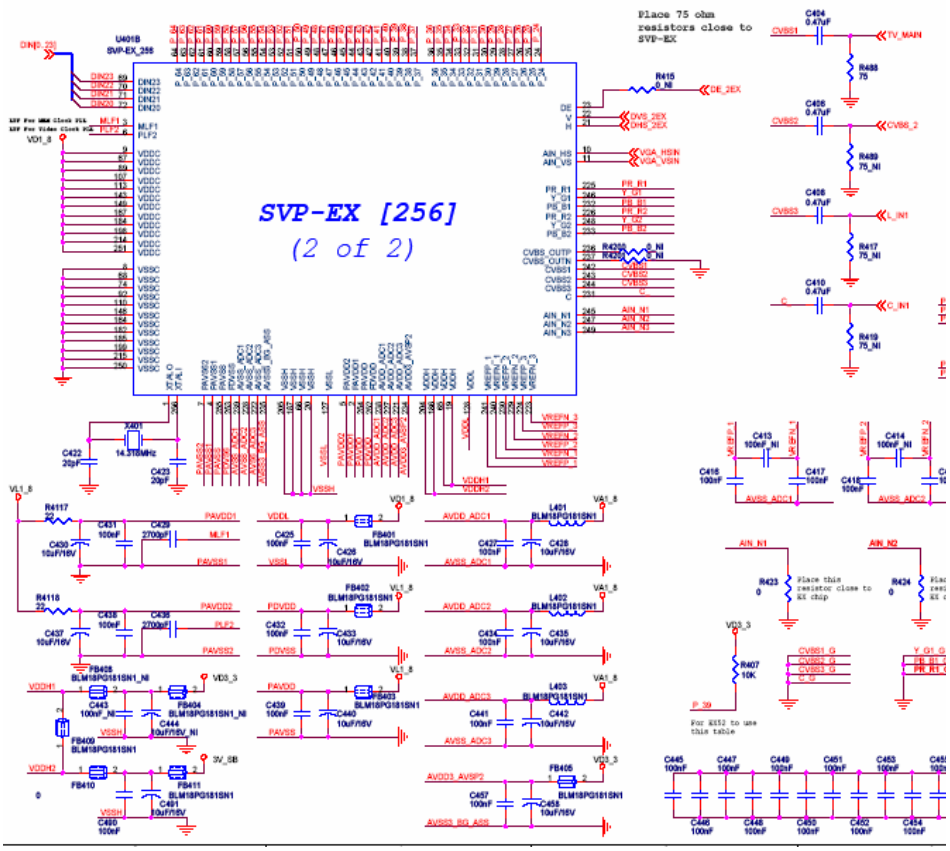
14、Schematic diagram

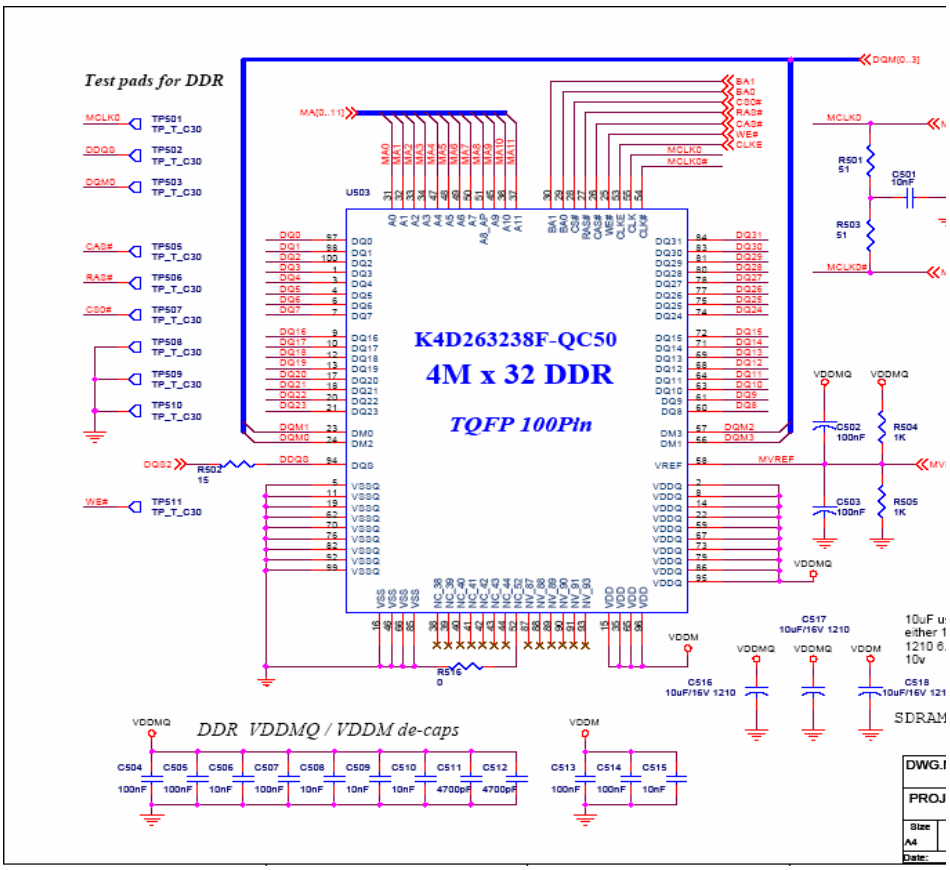


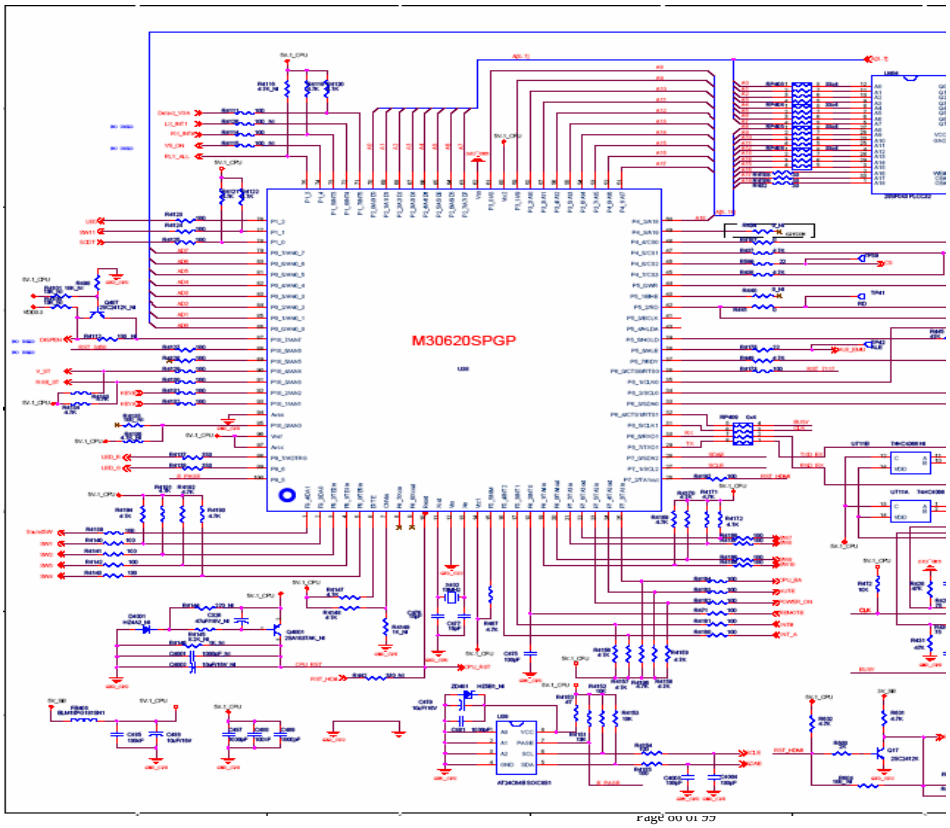


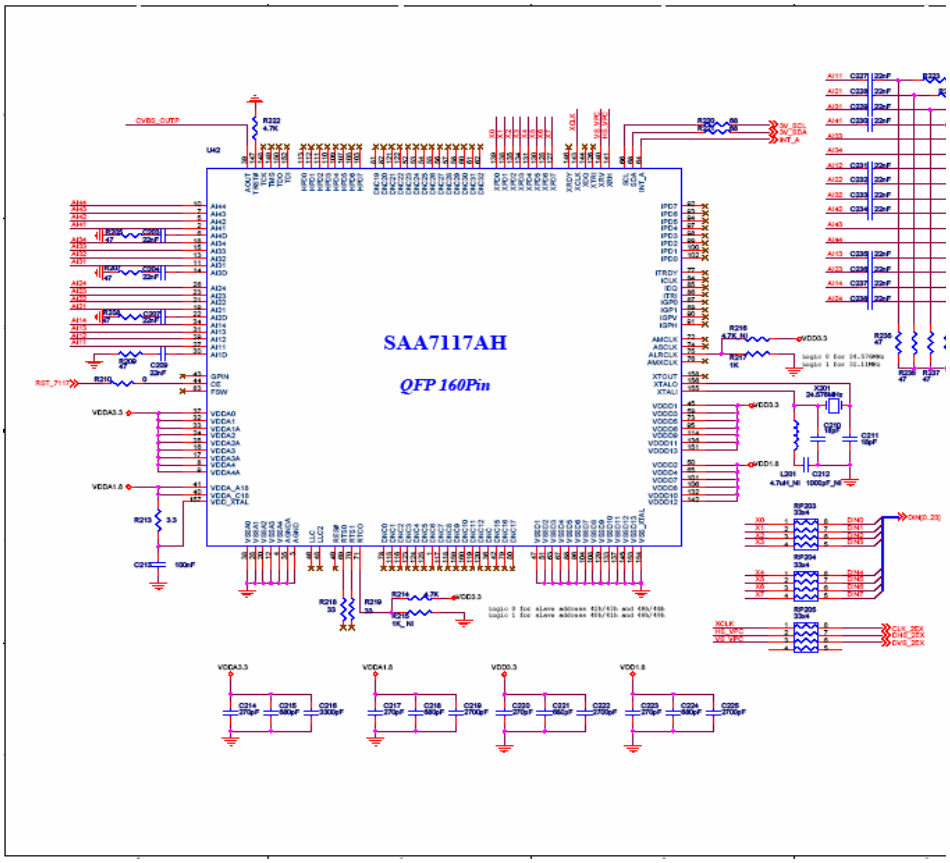
INPUT		OUTPUT			
MPUGPIO1	MPUGPIO0	MPUCS0N	*CS1N	MPUGPIO2	MPUGPIO3
0	0	0	1	1	1
0	1	1	0	1	1
1	0	1	1	0	1
1	1	1	1	1	0

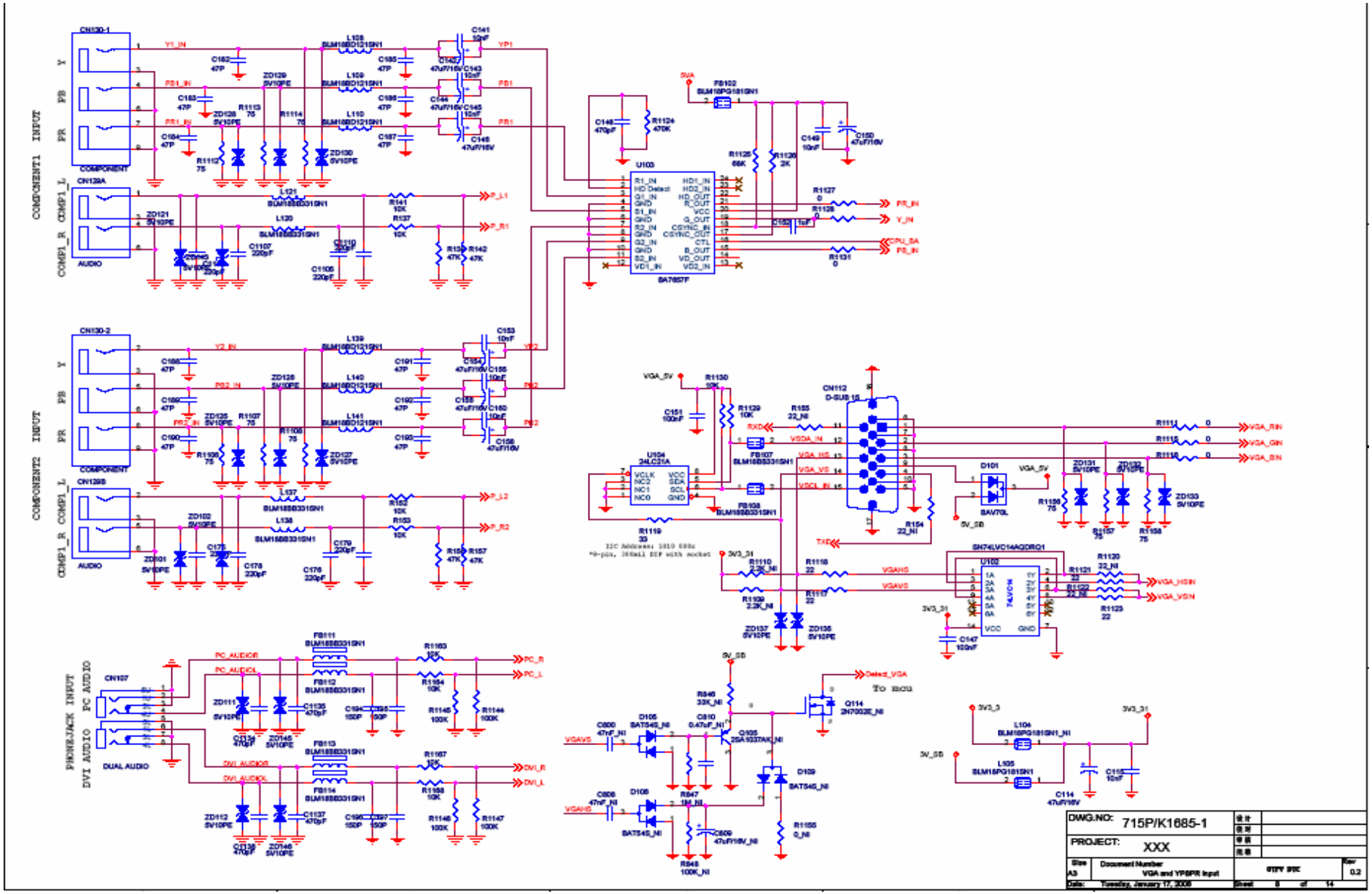
*CS1N is not a input or output pin
CS1N=0: SVP-EX CPU access enabled
CS1N=1:SVP-EX CPU access disabled

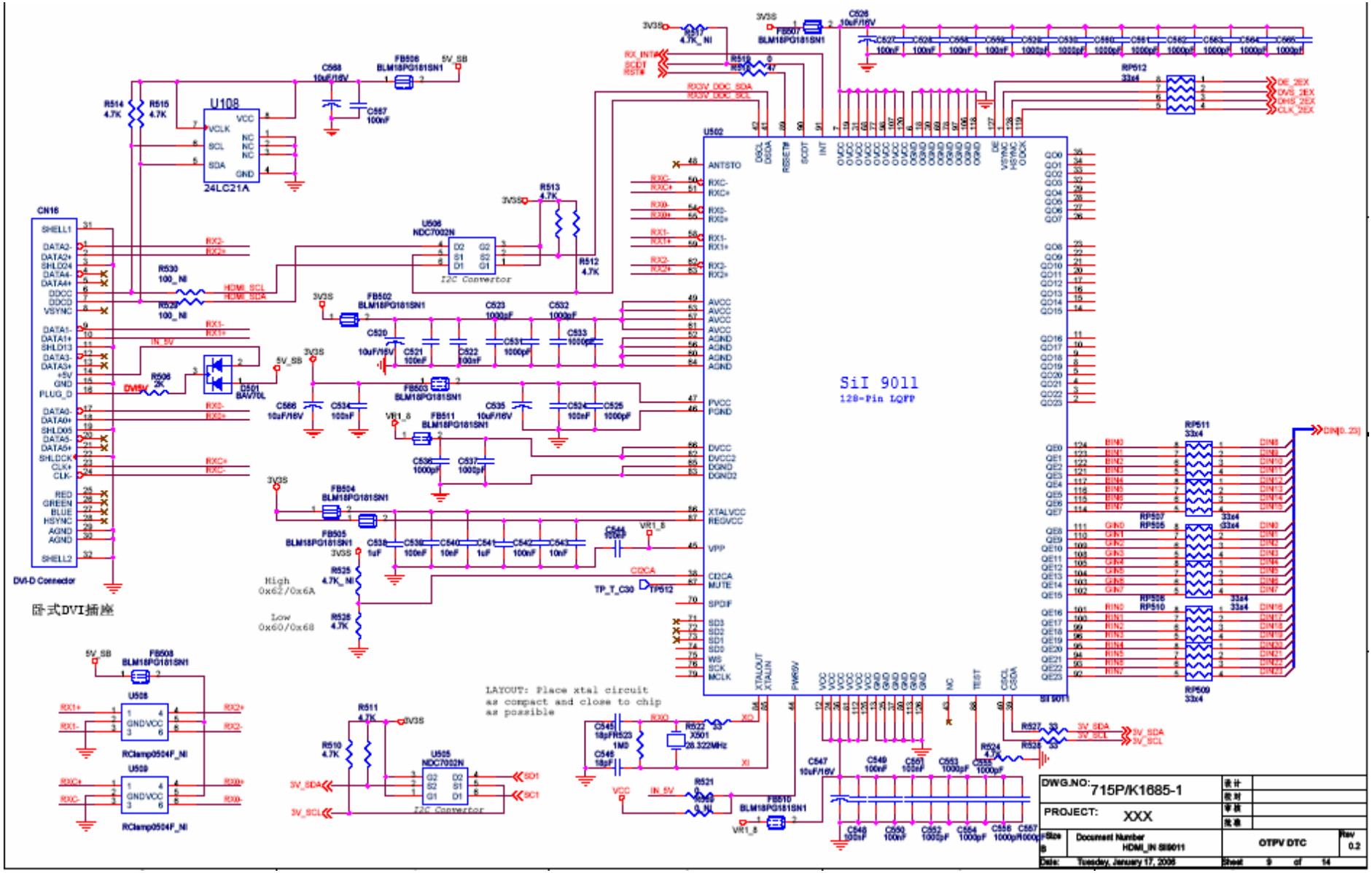

SVP-EX [256]
(2 of 2)
U401B
SVP-EX_256
Place 75 ohm resistors close to SVP-EX
X401
14.318MHz
C422 20pF
C423 20pF
R415 0_NI
DE_2EX
DVS_2EX
DHS_2EX
VGA_HSIN
VGA_VSIN
C404 0.47uF
C406 0.47uF
C408 0.47uF
C410 0.47uF
R488 75
R489 75_NI
R417 75_NI
R419 75_NI
TV_MAIN
CVBS6_2
L_IN1
C_IN1
C413 100nF_NI
C414 100nF_NI
C416 100nF
C417 100nF
C418 100nF
C419 100nF
AVSS_ADC1
AVSS_ADC2
AIN_N1
AIN_N2
R423 0
R424 0
R407 10K
VD3_3
FB401 BLM18PG181SN1
FB402 BLM18PG181SN1
FB403 BLM18PG181SN1
FB404 BLM18PG181SN1_NI
FB405 BLM18PG181SN1
FB406 BLM18PG181SN1_NI
FB407 BLM18PG181SN1
FB410
FB411 BLM18PG181SN1
L401 BLM18PG181SN1
L402 BLM18PG181SN1
L403 BLM18PG181SN1
3V_SB

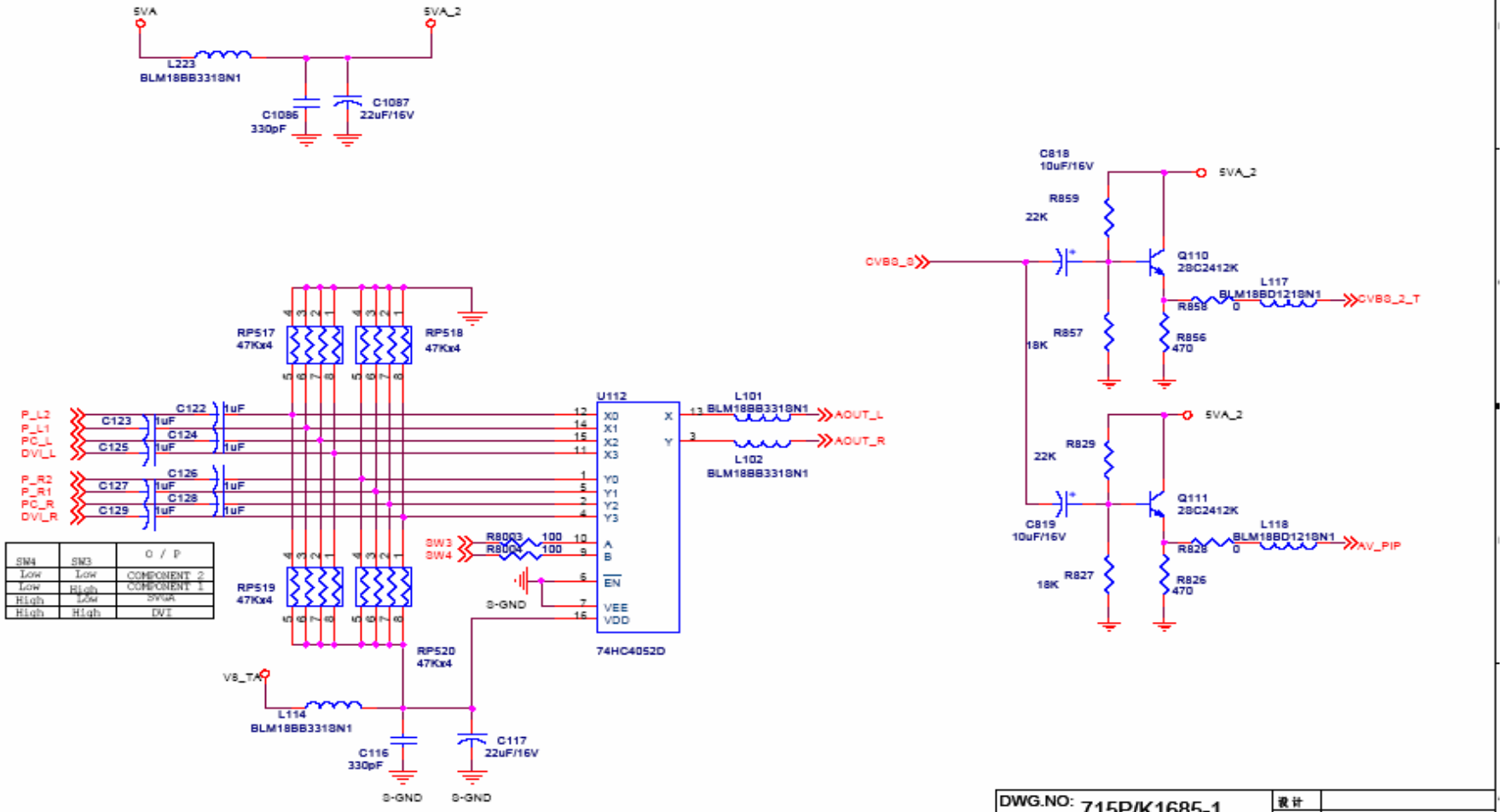

Test pads for DDR
K4D263238F-QC50
4M x 32 DDR
TQFP 100Pin
DDR VDDMQ / VDDM de-caps
SDRAM


M30620SPGP

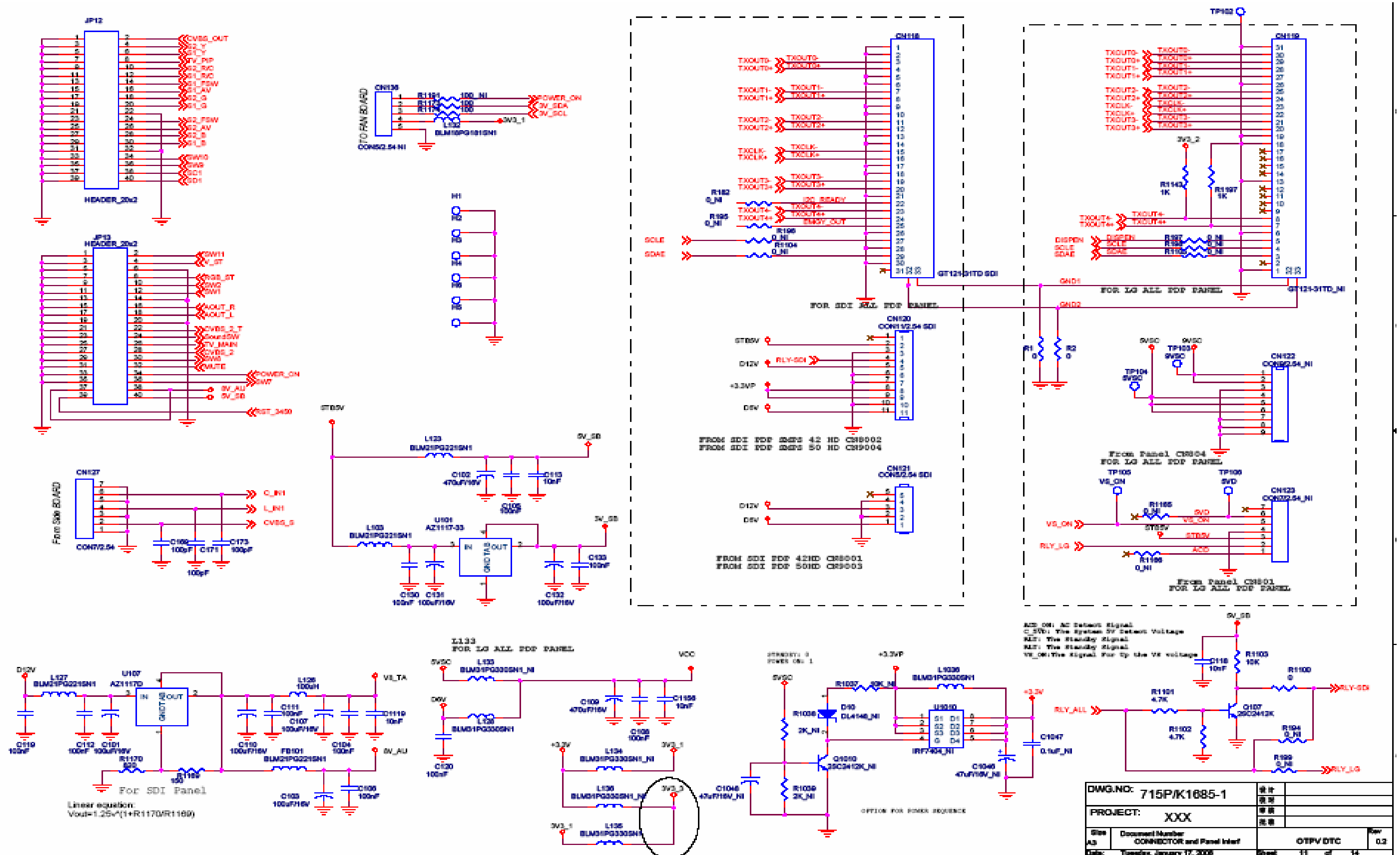

SAA7117AH
QFP 160Pin


COMPONENT1 INPUT
COMPONENT2 INPUT
PHONEJACK INPUT
PC AUDIO
DVI AUDIO
CN130-1
CN129A
CN130-2
CN129B
CN107
COMPONENT
AUDIO
DUAL AUDIO
U103
BA7657F
U104
24LC21A
CN112
D-SUB 15
U102
SN74LVC14AQDRQ1
Q114
2N7002E_NI
Q105
2SA1037AK_NI
To MCU
Detect_VGA
VGA_RIN
VGA_GIN
VGA_BIN
VGA_HSIN
VGA_VSIN
P_L1
P_R1
P_L2
P_R2
PC_R
PC_L
DVI_R
DVI_L
DWG.NO: 715P/K1685-1
PROJECT: XXX
Size A3
Document Number VGA and YPBPR Input
Rev 0.2
Date: Tuesday, January 17, 2006
Sheet 8 of 14

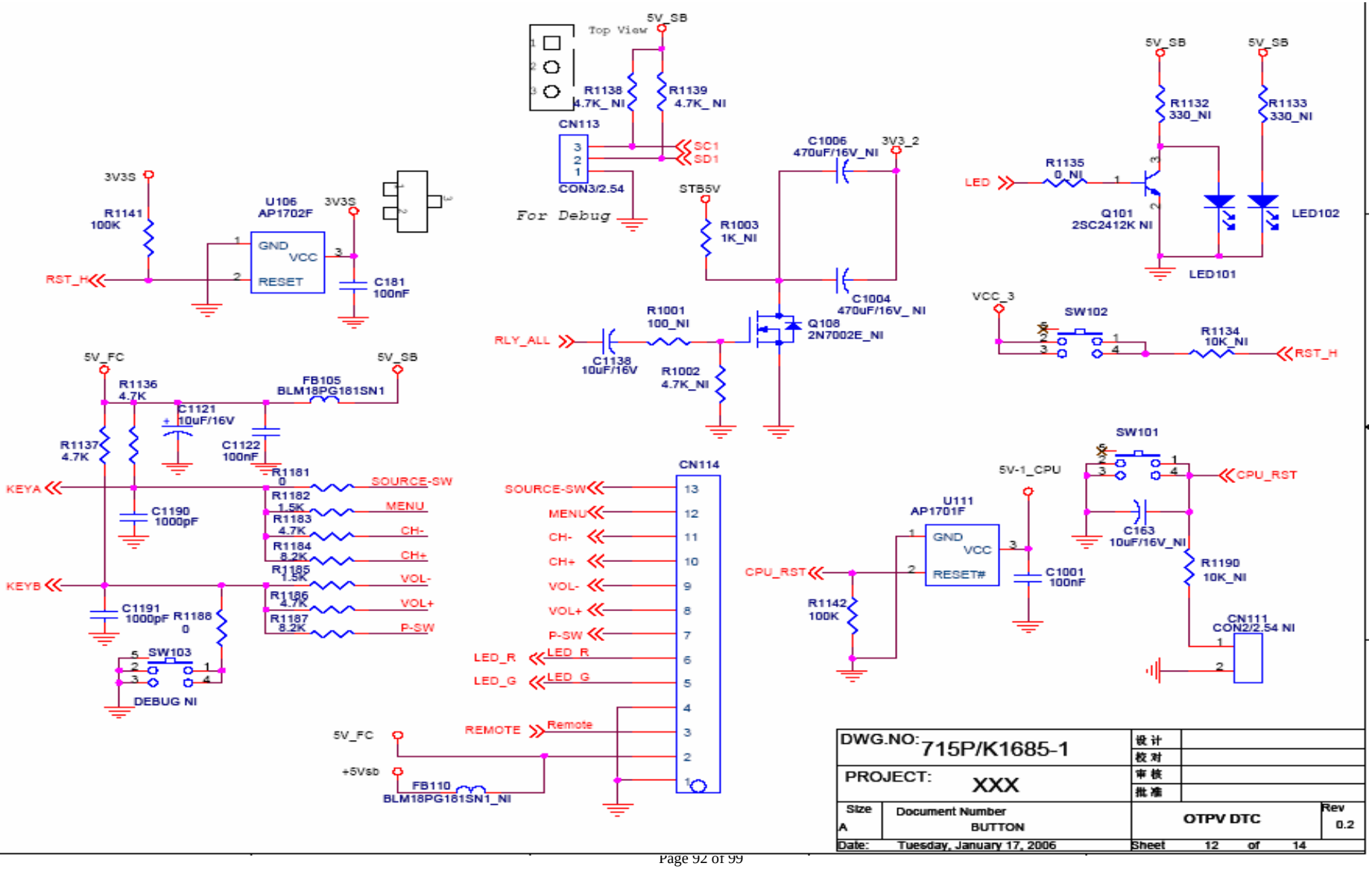

SiI 9011
128-Pin LQFP
U502
U108
24LC21A
U506
NDC7002N
I2C Connector
CN16
DVI-D Connector
卧式DVI插座
U508
U509
RClamp0504F_NI
U505
NDC7002N
I2C Connector
High
0x62/0x6A
Low
0x60/0x68
LAYOUT: Place xtal circuit
as compact and close to chip
as possible
X501
28.322MHz
DWG.NO: 715P/K1685-1
PROJECT: XXX
Size B
Document Number HDMI_IN SII9011
OTPV DTC
Rev 0.2
Date: Tuesday, January 17, 2006
Sheet 9 of 14

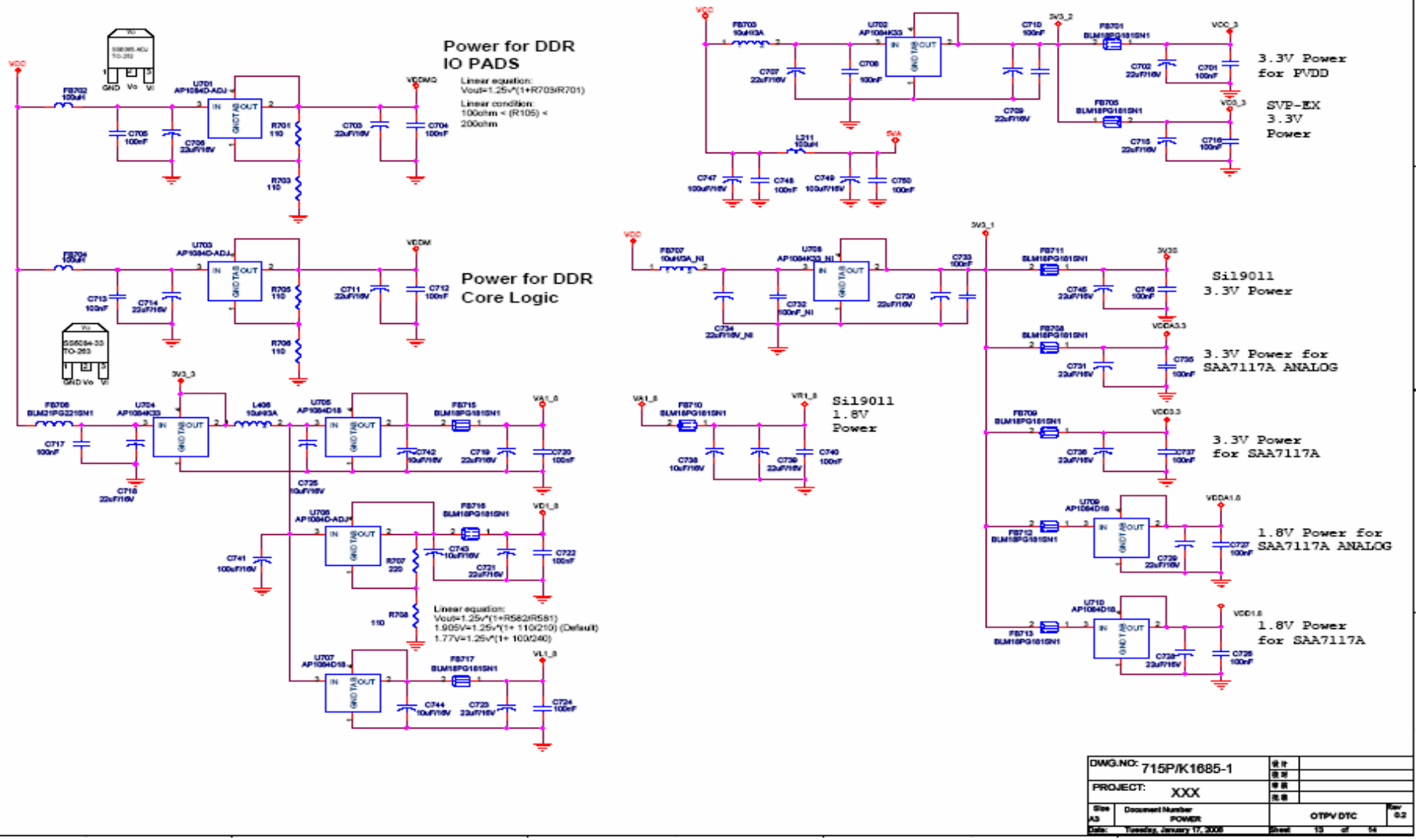


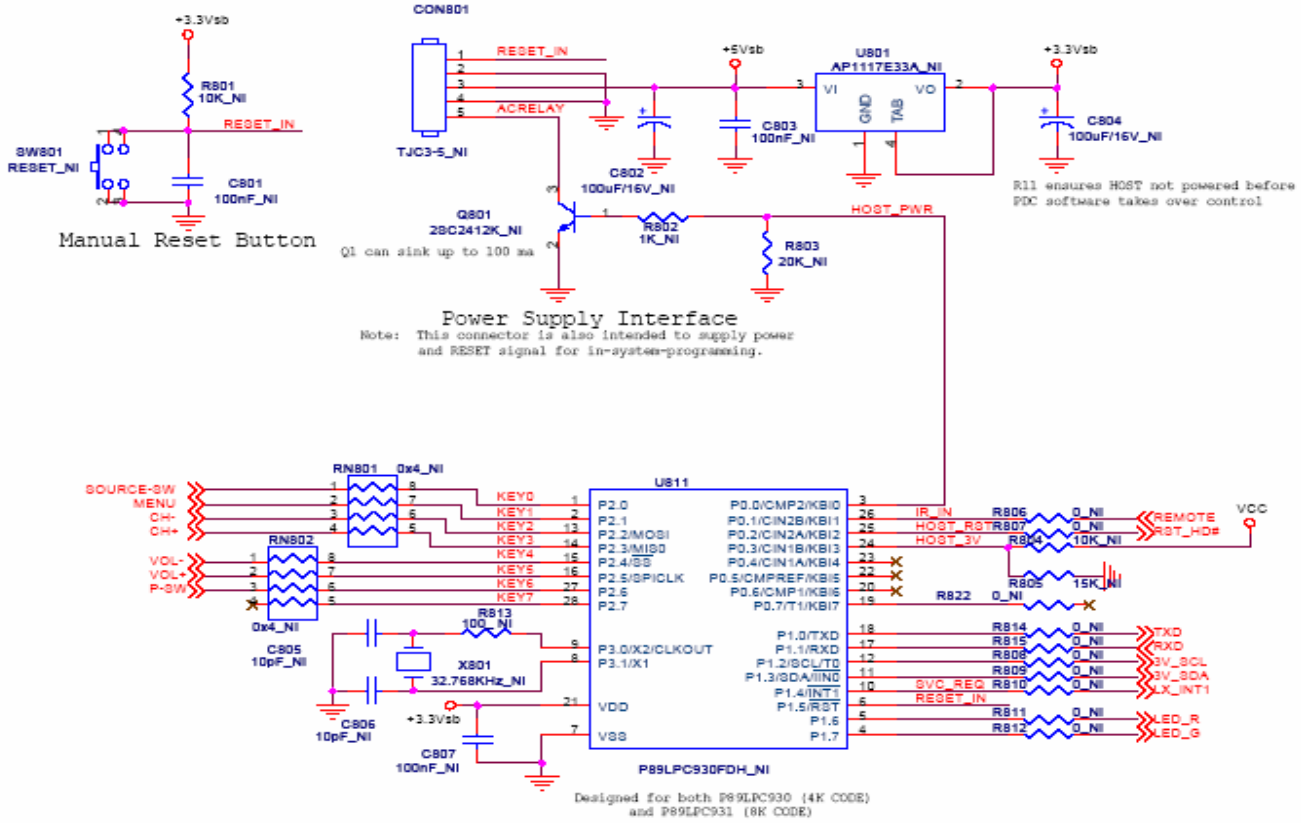
DWG.NO: 715P/K1685-1	设计	
	校对	
PROJECT: XXX	审核	
	批准	
Size A4 / Document Number AV INPUT	OTPV DTC	Rev 0.2
Date: Tuesday, January 17, 2006	Sheet 10 of 14	



DWG.NO:	715P/K1685-1		
PROJECT:	XXX		
Size A3	Document Number CONNECTOR and Panel interf	OTPV DTC	Rev 0.2
Date:	Tuesday, January 17, 2006	Sheet 11 of 14	

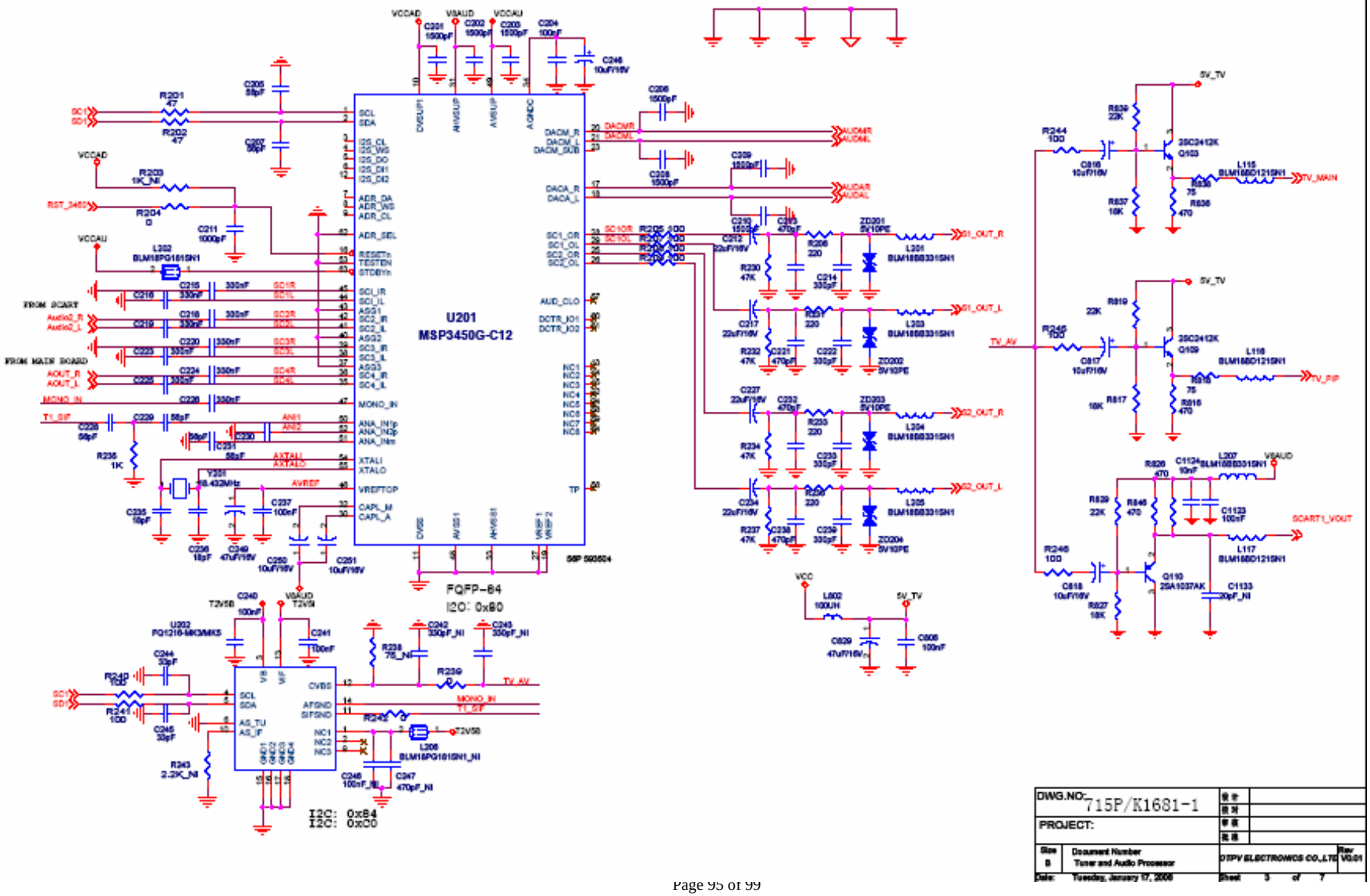

3V3S
R1141
100K
RST_H
U106
AP1702F
GND
VCC
RESET
C181
100nF
5V_SB
Top View
R1138
4.7K_NI
R1139
4.7K_NI
CN113
SC1
SD1
CON3/2.54
For Debug
STB5V
R1003
1K_NI
C1006
470uF/16V_NI
3V3_2
C1004
470uF/16V_NI
R1001
100_NI
RLY_ALL
C1138
10uF/16V
R1002
4.7K_NI
Q108
2N7002E_NI
5V_FC
R1136
4.7K
FB105
BLM18PG181SN1
C1121
10uF/16V
C1122
100nF
R1137
4.7K
KEYA
KEYB
C1190
1000pF
C1191
1000pF
R1188
0
SW103
DEBUG NI
R1181
0
R1182
1.5K
R1183
4.7K
R1184
8.2K
R1185
1.5K
R1186
4.7K
R1187
8.2K
SOURCE-SW
MENU
CH-
CH+
VOL-
VOL+
P-SW
CN114
LED_R
LED_G
REMOTE
Remote
+5Vsb
FB110
BLM18PG181SN1_NI
R1132
330_NI
R1133
330_NI
LED
R1135
0_NI
Q101
2SC2412K NI
LED102
LED101
VCC_3
SW102
R1134
10K_NI
RST_H
SW101
CPU_RST
5V-1_CPU
U111
AP1701F
RESET#
C1001
100nF
R1142
100K
C163
10uF/16V_NI
R1190
10K_NI
CN111
CON2/2.54 NI
DWG.NO: 715P/K1685-1
PROJECT: XXX
Size A
Document Number BUTTON
OTPV DTC
Rev 0.2
Date: Tuesday, January 17, 2006
Sheet 12 of 14
设计
校对
审核
批准

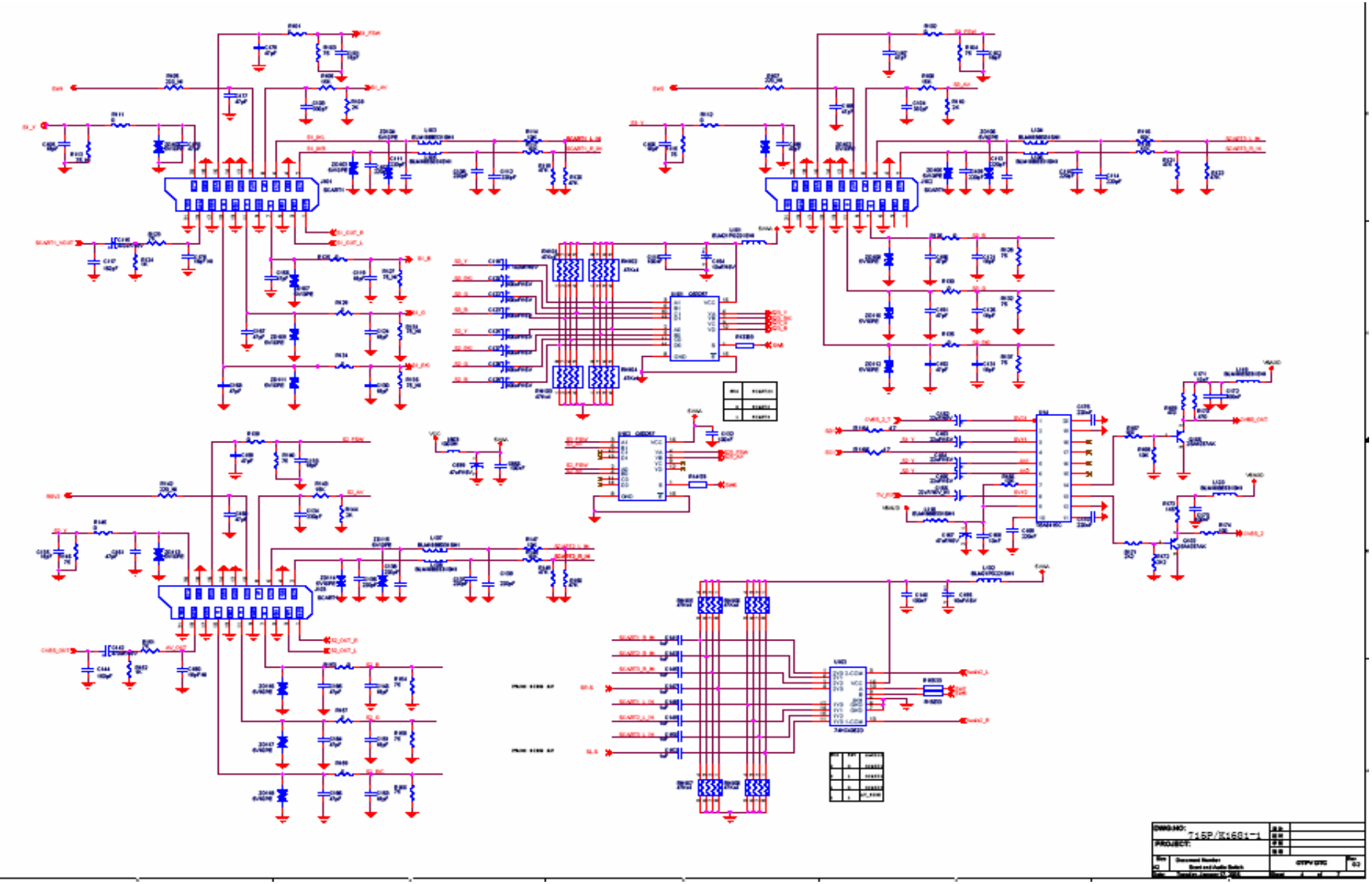

Power for DDR
IO PADS
Linear equation:
Vout=1.25v*(1+R703/R701)
Linear condition:
100ohm < (R105) < 200ohm
Power for DDR
Core Logic
3.3V Power
for PVDD
SVP-EX
3.3V
Power
Sil9011
3.3V Power
3.3V Power for
SAA7117A ANALOG
3.3V Power
for SAA7117A
1.8V Power for
SAA7117A ANALOG
1.8V Power
for SAA7117A
Sil9011
1.8V
Power
Linear equation:
Vout=1.25v*(1+R582/R581)
1.905V=1.25v*(1+ 110/210) (Default)
1.77V=1.25v*(1+ 100/240)
DWG.NO: 715P/K1685-1
PROJECT: XXX
Size A3
Document Number POWER
OTPV DTC
Rev 0.2
Date: Tuesday, January 17, 2006
Sheet 13 of 14

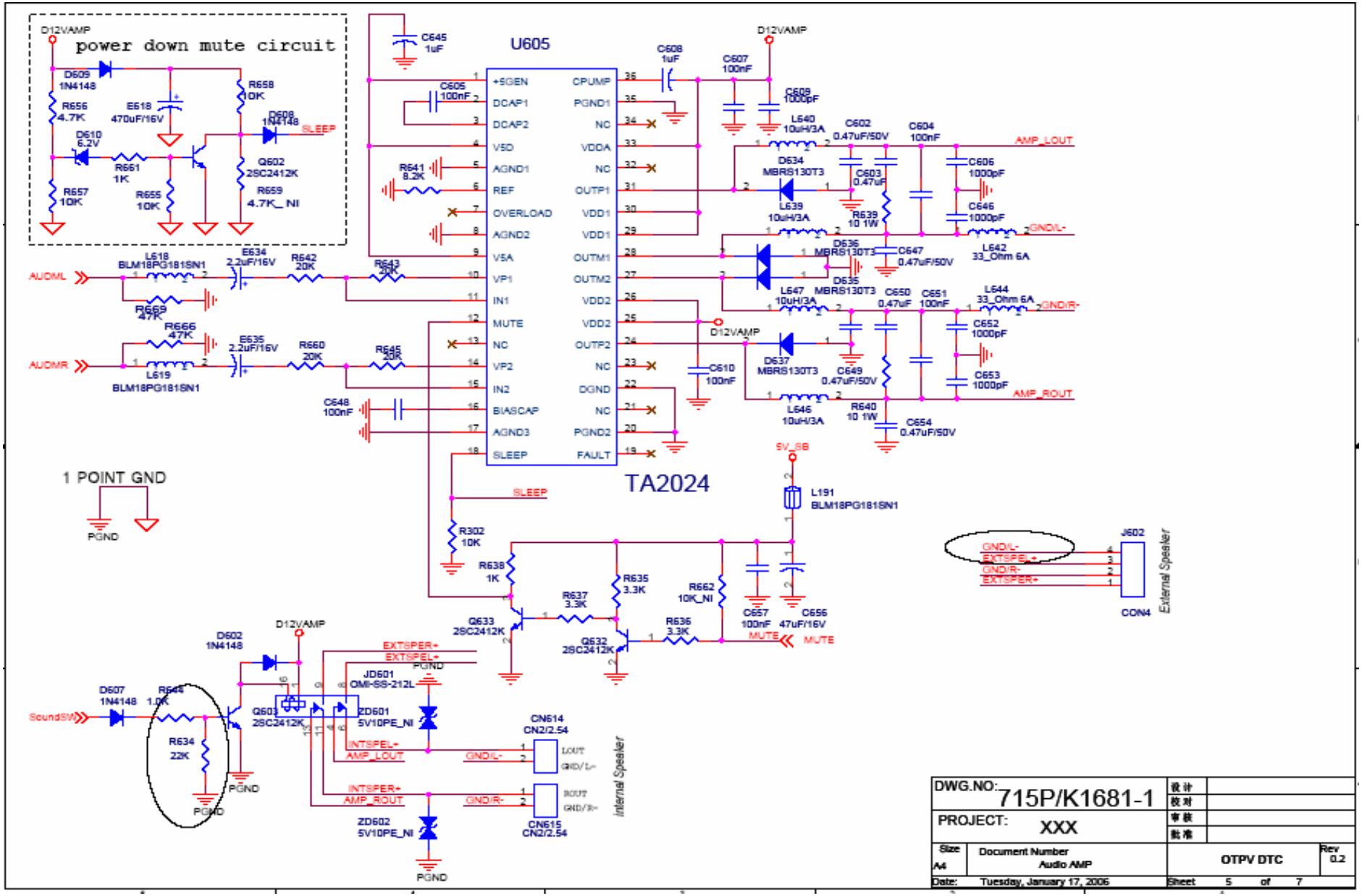


HOST INTERFACE SIGNALS (EXCLUDING KEYPAD SIGNALS)		
SIGNAL LABEL	DIRECTION	DESCRIPTION
HOST_VCC	INPUT	+5V POWER SUPPLY OF HOST ELECTRONICS
HOST_RESET	OUTPUT	SIGNAL TO RESET HOST ELECTRONICS
SVC_REQ	OUTPUT	FLAG TO REQUEST HOST CONTROLLER SERVICE
SCL, SDA	OUTPUT	HOST IIC COMMUNICATION BUS
GPIO[0..3]	INPUT/OUTPUT	SPARE I/O PORT CONTROLLABLE BY HOST CONTROLLER

DWG.NO: 715P/K1685-1		设计	
		校对	
PROJECT: Tridos Main board		审核	
		批准	
Size A4	Document Number PDC Module	北京东方阳光股份有限公司	Rev A
Date: Tuesday, January 17, 2006		Sheet 14 of 14	


U201
MSP3450G-C12
FQFP-64
I2C: 0x80
I2C: 0x84
I2C: 0xC0
DWG.NO: 715P/K1681-1
PROJECT:
Document Number
Tuner and Audio Processor
DTPV ELECTRONICS CO.,LTD
Tuesday, January 17, 2006




power down mute circuit
D12VAMP
D609 1N4148
R658 10K
R656 4.7K
E618 470uF/16V
D608 1N4148
SLEEP
D610 6.2V
R661 1K
Q602 2SC2412K
R657 10K
R655 10K
R659 4.7K_NI
U605
TA2024
+5GEN
DCAP1
DCAP2
V5D
AGND1
REF
OVERLOAD
AGND2
V5A
VP1
IN1
MUTE
NC
VP2
IN2
BIASCAP
AGND3
SLEEP
CPUMP
PGND1
NC
VDDA
NC
OUTP1
VDD1
VDD1
OUTM1
OUTM2
VDD2
VDD2
OUTP2
NC
DGND
NC
PGND2
FAULT
C645 1uF
C605 100nF
R641 8.2K
C608 1uF
C607 100nF
C609 1000pF
L640 10uH/3A
C602 0.47uF/50V
C604 100nF
AMP_LOUT
D634 MBRS130T3
C603 0.47uF
R639 10 1W
L639 10uH/3A
C606 1000pF
C646 1000pF
GND/L-
D636 MBRS130T3
C647 0.47uF/50V
L642 33_Ohm 6A
D635 MBRS130T3
L647 10uH/3A
C650 0.47uF
C651 100nF
L644 33_Ohm 6A
GND/R-
C652 1000pF
D637 MBRS130T3
C649 0.47uF/50V
C653 1000pF
AMP_ROUT
L646 10uH/3A
R640 10 1W
C654 0.47uF/50V
C610 100nF
AUDML
L618 BLM18PG181SN1
E634 2.2uF/16V
R642 20K
R643 20K
R669 47K
AUDMR
R666 47K
L619 BLM18PG181SN1
E635 2.2uF/16V
R660 20K
R645 20K
C648 100nF
1 POINT GND
PGND
5V_SB
L191 BLM18PG181SN1
R302 10K
R638 1K
R637 3.3K
R635 3.3K
R662 10K_NI
R636 3.3K
Q633 2SC2412K
Q632 2SC2412K
C657 100nF
C656 47uF/16V
MUTE
J602
CON4
External Speaker
D602 1N4148
D12VAMP
EXTSPER+
EXTSPEL+
PGND
JD601 OMI-SS-212L
D607 1N4148
R644 1.0K
SoundSW
Q603 2SC2412K
ZD601 5V10PE_NI
R634 22K
CN614 CN2/2.54
INTSPEL+
AMP_LOUT
GND/L-
LOUT
INTSPER+
AMP_ROUT
GND/R-
ROUT
Internal Speaker
ZD602 5V10PE_NI
CN615 CN2/2.54
DWG.NO: 715P/K1681-1
PROJECT: XXX
Size A4
Document Number Audio AMP
OTPV DTC
Rev 0.2
Date: Tuesday, January 17, 2006
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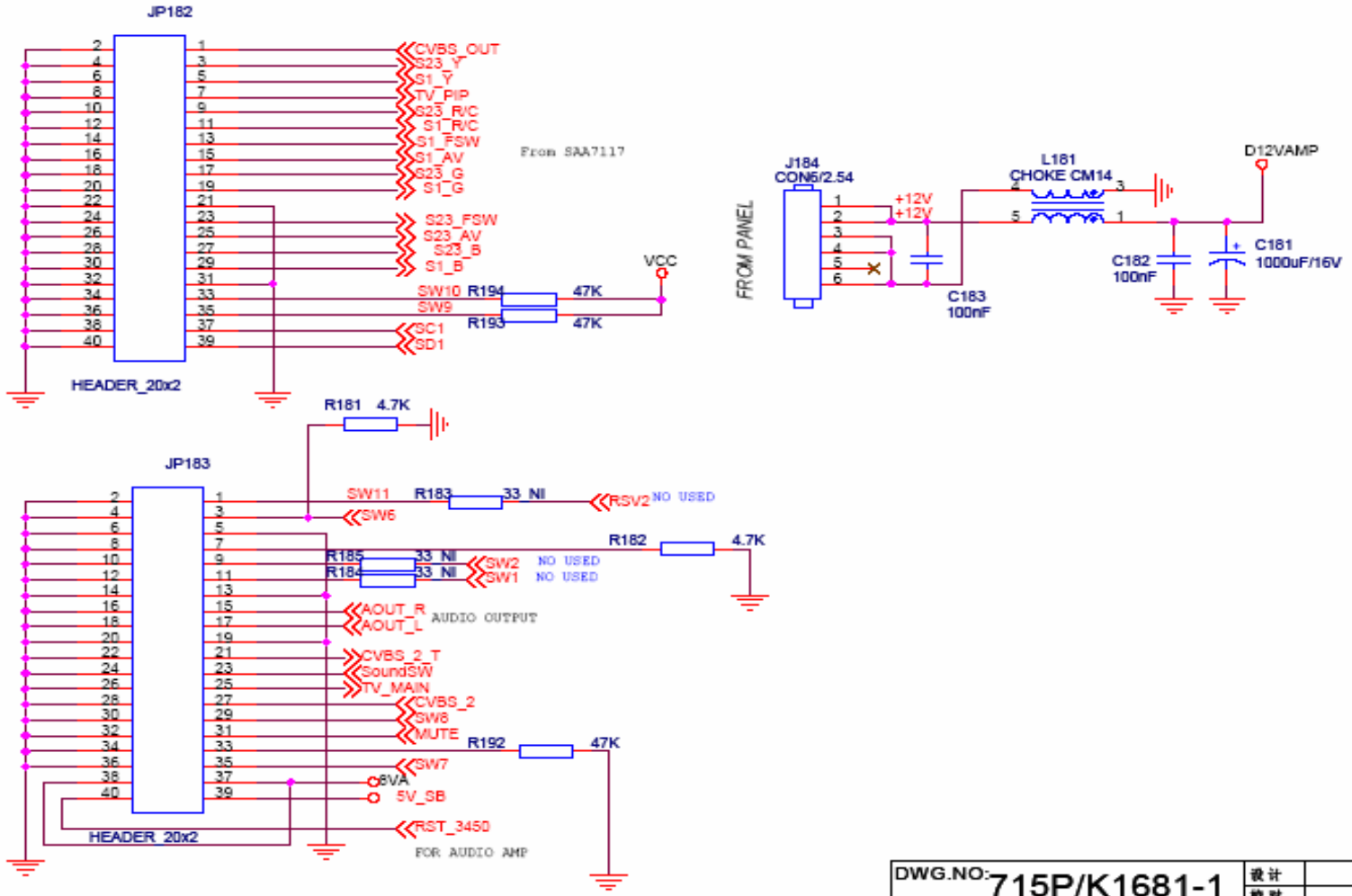

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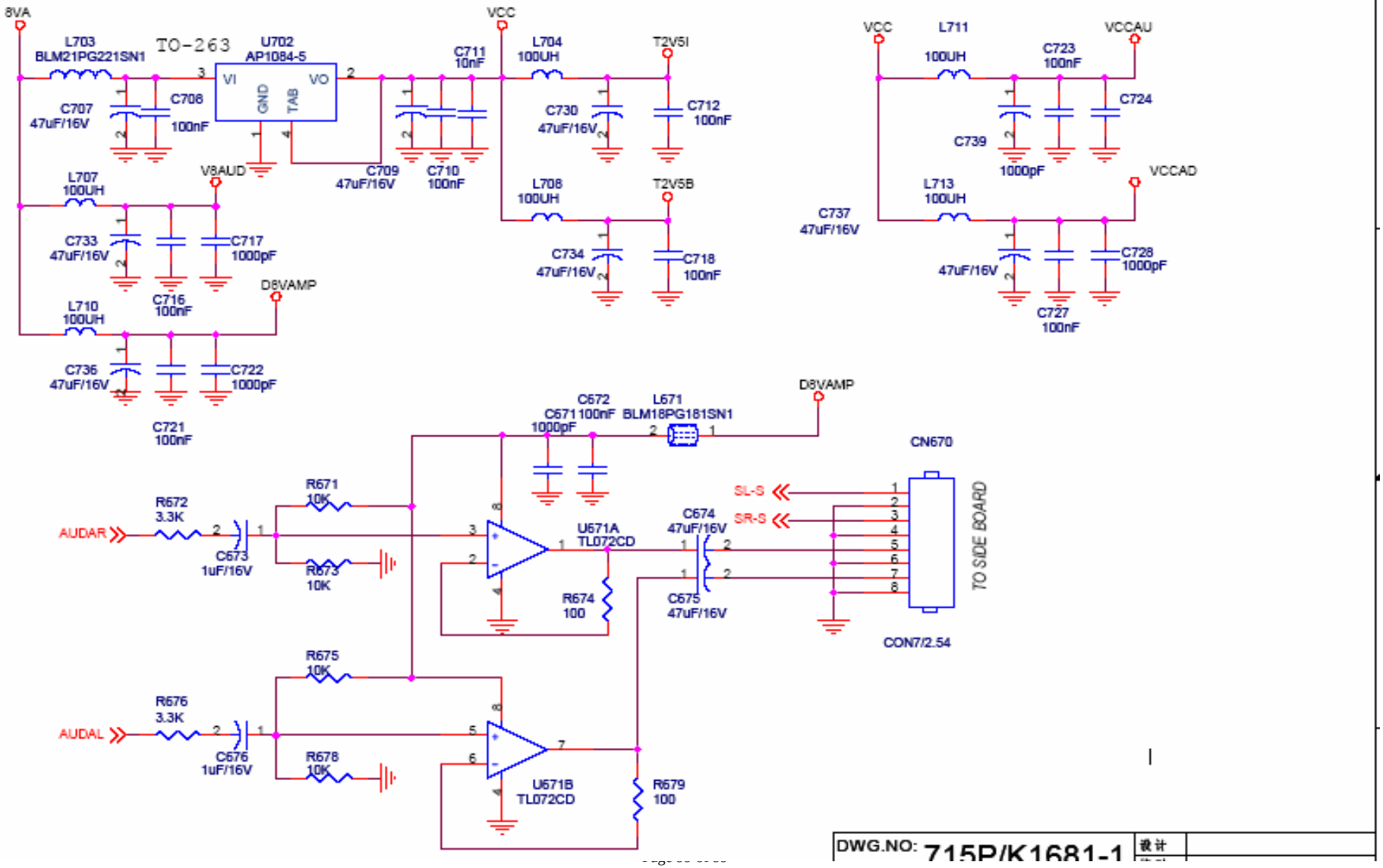
PROJECT: XXX		审核	
		批准	
Size: A	Document Number: System Connectors	OTPV DTC	Rev: 0.2
Date: Tuesday, January 17, 2006		Sheet 6 of 7	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GND
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V8AUD
C709
47uF/16V
C710
100nF
VCC
C711
10nF
L704
100UH
T2V5I
C730
47uF/16V
C712
100nF
L708
100UH
T2V5B
C734
47uF/16V
C718
100nF
L707
100UH
C733
47uF/16V
C717
1000pF
C716
100nF
D8VAMP
L710
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C736
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VCCAU
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C727
100nF
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1000pF
L671
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CN670
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10K
R672
3.3K
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C673
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10K
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47uF/16V
SL-S
SR-S
R674
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C675
47uF/16V
TO SIDE BOARD
CON7/2.54
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R676
3.3K
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DWG.NO: 715P/K1681-1
设计